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Migration Studies in the Age of Climate Change, the Blue Humanities, and Amitav Ghosh's *Gun Island*

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Human mobility has become one of the most pressing contemporary issues. The phenomenon is most often examined in migration studies, which consolidated as a field in the 1930s in the US, the UK, and Germany. Dominated by approaches from the social sciences, such as economics, sociology, and demography (Pisarevskaya et al. 2020, 457), the field has had few interactions with perspectives that attend to the nonhuman world. Even though the founders of migration studies mentioned the environment as a factor in human mobility, ecology was virtually absent from the field throughout most of the twentieth century (Piguet 2013; Parsons 2021; Faist 2020). Instead, economic paradigms took a dominant role in migration theory, while political concerns began to inform refugee studies in ways that mirror legalized differences between economic and political migration (Piguet 2013).

Migration studies scholars have remained skeptical of approaches that predominantly emerged in climate studies, disaster research, and conflict studies to characterize climate change as a major driver of human mobility (Abel et al. 2019; Ferris 2020). The bulk of these inquiries have focused on increases in extreme weather events—primarily in the United States, Bangladesh, and Mexico (Piguet et al. 2018, 369; Ferris 2020; Parsons 2021)—that are associated with climate change as a major feature of a new geological epoch called the Anthropocene. Climate scientists Paul Crutzen and Eugene Stoermer (2000) have proposed this term for a new period, dating to the Industrial Revolution, during which the effects of human activity on the earth's geology and ecosystems have taken the form of climate change. Because weather events that are increasingly associated with a warming climate tend to displace people to nearby locations rather than lead to massive international mobility, they are seldom the focus of migration studies.

Slow-onset manifestations of climate change, like drought and rising sea levels, in contrast, are understood as potential drivers of conflict in the Global South and international migration to the Global North (Parsons 2021, 11–12; Boas et al. 2019), which is often framed in racialized discourses about “climate refugees” (Baldwin 2013).¹ Climate scholarship on Syria, in particular, has argued that declining water resources and the 2007–2010 drought led to crop failures and economic decline, which triggered conflict and mass migration to urban areas, where overcrowding, unemployment, and inequality contributed to political unrest in 2015.² The view of climate change as a primary factor of social breakdown, which has rendered Syrians the numerically largest refugee population in the world (Todd 2019), has also shaped US policy discourses on migration. Presenting Syrian migrants as security threats or objects of humanitarianism, these accounts downplay Syrians' agency in initiating large-scale political protest movements against the al-Assad regime (Ahuja 2020). They also diminish the role of other drivers of conflict, deteriorating climate, and migration—particularly the drastic neoliberal reforms Syria has experienced since the early 2000s.

More recently, migration studies scholars have begun to explore a broader array of mobility responses (Bettini, Nash, and Gioli 2017), and European scholarship has caught up to the extensive body of US research (Bommes and Morawska 2005, 14). While much US scholarship on migration—as well as the field of border studies—has focused on movement via the US-Mexico land boundary, border studies scholars have begun to examine the more global scale of border crossings. At the same time, migration studies have attended to the sheer scale of human movement via the Mediterranean Sea. In 2015 alone, one million people, primarily from Syria, Afghanistan, Iraq, and Sub-Saharan Africa, reached European borders via this route (Todd 2019).

A reading of Amitav Ghosh's ninth novel *Gun Island* (2019), the last work in his Ibis trilogy, highlights the climate dimensions of contemporary Mediterranean migration and its underexamined relationship to oceanic ecosystems and colonial histories of oceanic human mobility. *Gun Island* recasts the fictional Bengali legend of the Hindu gun merchant Bonduki Sadagar, who left the Mughal Empire to escape a series of misfortunes after refusing to obey the goddess Manasa Devi. He is captured at sea, enslaved, and eventually escapes from bondage. The novel's narrator, an Indian American rare book dealer named Deen, speculates that the legend references events connected to seventeenth-century maritime commerce, the oceanic slave trade, and European colonialism via previously



unconnected oceans, which climate scientists Simon L. Lewis and Mark A. Maslin (2015) have identified as the starting point of the Anthropocene. Their work suggests that colonialism enabled the Industrial Revolution that Paul Crutzen and Eugene Stoermer initially identified as the origin of the climate crisis. During Deen's present-day travels to India and Italy, he witnesses the reenactment of the legend in the form of intersecting human and nonhuman mobility in the Mediterranean Sea, which includes migration to Italy from the Sundarbans, a region spanning India and Bangladesh.³

Scholars have read *Gun Island* as an allegory of climate change and of multispecies movement from drowning land, both of which are rooted in the legacies of colonialism (Kluwick 2020; Nuttall 2020). These interpretations, like the novel itself, employ approaches from the humanities-centered blue cultural studies (Mentz 2009) and critical oceanic studies (DeLoughrey 2017). The blue humanities focus on issues of ocean-bound European colonialism, travel, and forced human mobility, a perspective pioneered by Marcus Rediker (1987) and Paul Gilroy (1993). Critical oceanic studies add insights from the environmental humanities to examine oceanic multispecies environments in the context of climate change.⁴ The field emphasizes that, because oceans make up 70 percent of the planet's surface and provide more than half of its oxygen, they play an important role in regulating the earth's climate. Rising sea levels and warming oceans, which are associated with climate change, forecast a more oceanic and interconnected planetary future (DeLoughrey 2017, 32). As the largest species habitat, oceans are under threat from climate change and human activity. Higher oceanic temperatures and rising sea levels, overfishing, trawling, shipping, mining, and ultradeep drilling, as well as pollution from oil spills, synthetic fertilizers, heavy metals, radioactive materials, and plastic waste have all damaged oceanic multispecies environments and caused maritime animals to relocate, change their migration routes, or suffer mass deaths (LeMenager 2014; DeLoughrey 2019b).

Like work in the blue and oceanic humanities more generally, interpretations of *Gun Island* that rest on insights from the two fields have had less to say about the novel's focus on contemporary Mediterranean migration and its connections to climate change and histories of oceanic mobility.⁵ As Andrew Baldwin and colleagues have argued, the field of climate research has similarly tended to express little interest in "the ontological primacy of mobility and movement, the ever-presence of movement in social life, and the insight that mobility is political and thus a fundamental mechanism of social stratification" (2019, 289). *Gun Island* shows that climate change not only worsens economic conditions that drive human movement from the Sundarbans but also leads to modifications in nonhuman maritime mobility. By depicting parallels between contemporary Mediterranean migration and nonhuman movement, the novel meets what Ghosh has called "the central literary challenge of this era, which is how to give voice to the non-human" (quoted in Gill 2019). While *Gun Island* critiques European governments for militarizing their sea borders to stem migrant mobility, it levels even stronger criticism at multinational human trafficking rings, which it compares to the purveyors of the slave and indentured labor trade via the Atlantic and Indian Oceans.⁶ Even though this criticism largely overlooks migration studies' insights on the centrality of socioeconomic factors in the current rise in human trafficking and migration, *Gun Island* calls for new, interdisciplinary approaches that both recognize mobility and climate change as core, interlinked challenges and thus significantly diverge from the prevailing discourses on climate refugees.

Human Trafficking, Oceanic Militarization, and Multispecies Mobility in *Gun Island*

A reading of *Gun Island* moves contemporary Mediterranean migration to the forefront of blue and oceanic humanities approaches. It also suggests that migration scholarship, which tends to focus on human movement since the creation of nation-states, could benefit from a longer historical perspective on issues of displacement and (forced) oceanic mobility as well as an attention to migration as a multispecies phenomenon. The novel represents multispecies mobility in the context of climate change through forms other than literary realism or science fiction, which tend to dominate literary representations of climate change. In *The Great Derangement* (2016), Ghosh argued that realism is limited in its ability to represent climate events and nonhuman agency, the latter of which is often relegated to the realm of the fantastic (66). *Gun Island* deploys a Bengali legend to complicate what otherwise would look like a present-day, realistic travel narrative. Its narrator, Deen, realizes that the legend allows imaginary access to a past when humans understood their close connection to the environment and to nonhuman animals. Conceptualized as a sort of "presence," this knowledge of multispecies interdependency can literally "enter" into and become part of humans and be reenacted in the present. When Deen finds himself at a shrine devoted to the gun merchant Sadagar, he describes

this presence as “memory itself [. . .]; it was much older than me, some submerged aspect of time that had been brought suddenly to life when I entered that shrine” (2019, 113). He speculates that, rather than separating us from animals, storytelling may actually be “the last remnant of our animal selves” and a way to communicate with the nonhuman world, which can only “speak to us through stories as the last vestige from a time before language” (141). Deen comes to believe that “[o]nly through stories can invisible or inarticulate or silent beings speak to us; it is they who allow the past to reach out to us” (141). He hypothesizes that Manasa Devi’s insistence on Sadagar’s obedience may have been her attempt to translate “between two species that had no language in common and no shared means of communication” (167)—specifically, to communicate the plight of the nonhuman world to the gun merchant, whose maritime travels were driven by profit.

Sadagar’s seafaring voyages took place in the context of both the seventeenth-century globalization of trade via previously unconnected oceans and the advent of extreme weather. According to one version of the myth, the gun merchant left the Sundarbans not so much to escape the wrath of the goddess but to flee extreme drought and floods. Ghosh has said that the classic poems about the merchant “present a much more realistic picture of everyday life in Bengal than a lot of modern fiction. Because omnipresent in these stories are drought, famine, terrible storms” (quoted in Gill 2019). That the novel locates the events of the legend in the seventeenth century is significant, because the European colonization of the Americas has been suggested as a potential starting point for the Anthropocene. The transportation of organisms—such as crops, domesticated animals, and pathogens—across once-disconnected oceans led to the global homogenization of Earth’s biota (Lewis and Maslin 2015, 172) and to the globalization of diseases (Koch et al. 2019), which contributed to “a swift, ongoing and radical reorganization of life on Earth without geological precedent” (Lewis and Maslin 2015, 174). The mass deaths of Indigenous peoples following their exposure to European diseases, war, enslavement, and famine, in particular, led to such a significant decline in human activity that, by 1610, the ensuing regeneration of vegetation began to impact global atmospheric carbon levels and surface air temperatures (Lewis and Maslin 2015).

Deen also connects the tale of the gun merchant’s enslavement to the oceanic slave trade, which has also been the subject of much blue and oceanic humanities scholarship. He speculates that the mythical Sadagar may have been captured by Portuguese pirates and sold in Goa, the hub of the Indian Ocean slave trade, which enslaved many different people and overlapped with the African slave trade and which, in the nineteenth century, was replaced by the movement of indentured workers to Caribbean plantations. In Goa, Sadagar may have been bought by the trader Nakhuda Ilyas, who was either a Muslim named after the saint Ilyas or, alternatively, a Portuguese Jew dislocated by the Inquisition. In this version of the myth, Ilyas frees Sadagar, and the two become friends and travel to Venice, then a major transshipment point of the Atlantic slave trade, a hub of the spice trade, and the most cosmopolitan place in the world.

In Deen’s reading, the legend’s focus on oceanic movement from the Mughal Empire to Italy connects seventeenth-century colonialism to contemporary mobility and climate change in two of the world’s fastest vanishing bioregions: the Venice Lagoons and the Sundarbans.⁷ As it braids together Hindu and Muslim folklore, key elements of the merchant’s legend are reenacted in the contemporary travels of two friends (and lovers) from the Sundarbans: Ilyas (or Rafi), the son of the Muslim keepers of the gun merchant shrine, and Tipu, a Hindu of the lowest caste background who partly grew up in the United States. Tipu initially uses his computer and English language skills to work in Bangladesh’s profitable people-smuggling business. He provides a “point-to-point service” (68) by fabricating stories of persecution based on ethnicity or sexual orientation that help render migrants eligible for asylum claims in countries of the Global North. After Tipu is bitten by a cobra at the gun merchant’s shrine and thus infused with the legend’s interspecies knowledge, he begins to “speak for” dolphins by predicting the exact time and location of their mass beachings. The novel tells us that large-bodied animals like dolphins and whales are increasingly threatened by warming oceans and the emergence of dead zones due to pollution. Beachings seem to be caused by sounds from submarines and sonar equipment, and dolphin mass deaths follow changes in their migration routes to areas with high fishing and vessel activity.

Just as the snakebite grants Tipu the ability to provide mass-beaching forecasts to scientists and animal rights activists, it also convinces him to migrate to Italy with Rafi. Their decision is part of a larger response to the increased frequency of extreme weather events in the Sundarbans, which exacerbate already difficult economic conditions that act as push factors for migration. The novel’s narrator recounts that, while traffickers have smuggled large numbers of men from the area to construction sites in the Gulf countries or to Malaysia and Indonesia, ever since the destruction caused by cyclone Aila in 2009 the people-smuggling business has grown in response to worsened climate-induced

economic deterioration and now also transports people to more distant locations in Europe. In conjunction with rising sea levels, more frequent and intense cyclones not only damage and destroy human habitats but also render the soil unusable for farming. In addition, land degradation and unsustainable fishing practices, such as commercial trawling, contribute to diminishing the livelihoods of fishermen (Muller 2020).

In its emphasis on the migration of two Indian friends from Bangladesh to Europe, which reiterates patterns in the gun merchant legend, *Gun Island* highlights the legacies of European colonialism for contemporary mobility. The novel does not provide this context, but well-to-do South Asian migrants originally migrated to the UK because of their countries' status as former British colonies. In the late 1980s, however, Italy became a major European destination for less-wealthy people from these geographies after it provided legal avenues for admitting some non-EU residents and instituted periodic regularizations of undocumented migrants. The more recent Bangladeshi migrants move to cities like Venice that are located in Italy's wealthy northeast (Morad and Sacchetto 2020).

As Deen muses, whereas the Atlantic and Indian oceanic systems of indentured labor and chattel slavery were controlled by European empires, Rafi and Tipu launch their Mediterranean voyage to Europe with the help of multinational, profit-driven smuggling networks that possess the knowledge and resources to circumvent restrictive national immigration regimes and tightened borders. Rafi and Tipu need to rely on these traffickers (called *dalas*) of Bangladeshi, Afghan, and Kurdish background who, the novel does not mention, have moved migrants with more limited financial means to Europe via significantly longer and circuitous journeys ever since the militarization of the most popular and shorter Western Mediterranean route between Morocco and Spain. After the two cross into Bangladesh, they traverse several land borders on their way to Turkey, a major migration corridor to Europe, and eventually move via Eastern Europe to Italy. Each time the friends cross a national border, they are held in so-called connection houses, where they are extorted for additional money; those who cannot pay donate their organs. After they become separated during their last border crossing, Tipu remains in Turkey, and Rafi continues his travels via the Eastern Mediterranean route with a group of migrants from Iraq, Syria, Somalia, and Pakistan. Once he arrives in Italy, he borrows money for Tipu's passage from local labor recruiters, who are connected to the Italian mob and to crime syndicates in Nigeria, Libya, and Egypt. They not only help smuggle migrants into the country but keep them in debt and in a sort of labor bondage on farms and construction sites in the south.

With this loan, Tipu flies to Egypt to embark on the Central Mediterranean route toward Italy under the direction of an Ethiopian woman he saw in a dream. Tipu ends up in a connection house, where an unexpectedly strong tornado helps Ethiopian, Eritrean, Somali, Sudanese, and Bangladeshi migrants overpower their smugglers and seize a boat. The boat—painted blue—is reminiscent of earlier slave and coolie ships, which “in the service of commerce [. . .] had transported people between continents on an almost unimaginable scale, ultimately changing the demographic profile of the entire planet” (Ghosh 2019, 305). While *Gun Island* briefly references migrants who drowned in the ocean, it does not address the extreme perils of the Central Mediterranean route compared with other pathways to Europe.⁸ The length of the voyage adds to the dangers of vessels that are often purposefully dilapidated so that smugglers can sacrifice them upon discovery or completion of the trip. In 2014 alone, over three thousand people died on this route, compared to ninety-six who perished on the Western Mediterranean and fifty-nine on the Eastern Mediterranean route (“Missing Migrants” 2021).

The narrator does mention that Sicily, the projected endpoint of the blue ship's voyage, may have been where the gun merchant was once enslaved. One version of the myth recounts Sadagar's rescue from slavery through a miracle (rather than through his acquisition by sea captain and future friend Ilyas) and thus foretells the ending of the novel's contemporary migration story to Italy. After the merchant accepts Manasa Devi and promises to build her a shrine in the Sundarbans, the legend goes, “she wrought a miracle”: the ship that was to deliver him into slavery was besieged “by all manner of creatures, of the sea and sky,” which allowed the captives to seize the boat as well as their captors' goods (Ghosh 2019, 18).

This portion of the legend, told early on in the novel, repeats itself at the very end, when nonhuman and human migration converges on Italy's shores to save the migrants from being denied admission and exposed to possible drowning. Italy's interior minister had threatened to deploy navy and coast guard vessels to prevent the refugees from setting foot in Italy “unless there is a miracle” (207). Here the novel fictionalizes politics implemented by Matteo Salvini, leader of the far-right League party and Italy's leading proponent of hardline migration policies, who was in office between 2018 and 2019.⁹ As the boat with Tipu on board gets close to shore, millions of birds fly over top on their migration north, and many more species of whales and dolphins than would normally appear together in the Strait of Sicily's busy marine mammal corridor begin circling in place, possibly because the warships are also blocking the

mammals' migration routes. The novel shows that, in addition to experiencing mass deaths, dolphins have had to change their migration routes and move to new habitats in response to warming oceanic temperatures, rising sea levels, diminished freshwater resources, and growing dead zones in oceans and estuaries.¹⁰

When the Ethiopian woman on board the blue migrant ship, whom Tipu had connected with in Egypt, appears to direct a brief moment of marine bioluminescence, the navy admiral in charge of intercepting the refugees interprets “the storm of birds circling above, like a whirling funnel, and the graceful shadow of the leviathans in the glowing green water below” (307) literally as the miracle that voids the interior minister's decree. The admiral orders the kind of state-sponsored migrant rescue that right-wing politicians like Salvini have characterized as a pull factor for migration when they argue that refusing to help migrants deters them from embarking on oceanic voyages in the first place and thus saves lives. This cynical view of border enforcement as a deterrent to migrant mobility has also allowed Italian authorities to disrupt search and rescue missions carried out by nonstate actors, such as humanitarian organizations. The admiral's interpretation of the illuminated and converging animal migrations as a miracle is guided by his belief in the Black Madonna of Good Health statue, which is thought to have saved some Venetians from the 1629 plague, just as the shrine in the Sundarbans that honors the gun merchant's acceptance of Manasa Devi is credited with having saved nearby residents from the effects of the disastrous 1970 cyclone.

In an interview, Ghosh associated the novel's ending with the “uncanny” or inexplicable (Gill 2019), which in *The Great Derangement* he connected to the increasingly strange manifestations of climate change that indicate the “presence and proximity of nonhuman interlocutors” (Ghosh 2016, 30). Ghosh has argued against surrealism or magical realism as appropriate forms to represent climate change, since they risk rendering extreme weather events as mere allegories or highly improbably occurrences (20). And yet, like magical realism, the novel's use of the uncanny allows simultaneous realistic and “magical” interpretations. Characters can be read as reappearing tropes from a history understood as cyclical and, simultaneously, as protagonists who drive the present-day narrative plot. The Ethiopian woman could be another version of Manasa Devi. She guides the refugees' escape from bondage in the smugglers' connection house, their passage across the Mediterranean Sea, and the miraculous event that saves them from being prevented from landing. Similarly, a man who looks like the gun merchant provides directions to humanitarian rescue missions. However, the novel suggests, both characters could also just be migrants from Sub-Saharan or North Africa. The brief moment of bioluminescence that accompanies the meeting of migrating animals could be interpreted as an event that occurs widely among dinoflagellates, some species of which are known to migrate. Scientists in the novel thus claim that even though the convergence of so many different maritime species (and birds) in this popular Mediterranean migration corridor is unusual, it can be attributed to behavior changes in response to climate change—and that, therefore, the admiral was “wrong [. . .] there's a scientific explanation for everything that happened there” (309). But the event can also be read as reenacting a much longer interspecies history of nonhuman interactions with the human world, which is embodied in Deen's interpretation of the legend of the gun merchant. Such a reading also affirms the importance of human translators like Deen, Tipu, and the Egyptian migrant, as well as the mythical goddess Manasa Devi: all recognize and communicate to humans the impact of climate change on the nonhuman world, sometimes through “wondrous” events like bioluminescence (or unexpectedly strong hurricanes) that end up assisting human migrants in their struggles against traffickers and border enforcement.

Conclusion

In its attention to the legacies of colonialism and the climate dimensions of contemporary migration from the Sundarbans to Italy, *Gun Island* adds a focus on human mobility to critical oceanic studies approaches, which are geared at “rethink[ing] the ethics of human actions toward the nonhuman world so that they might be nondominating” (Winkiel 2019, 2). The novel's emphasis on climate change effects on both nonhuman mobility and contemporary Mediterranean migration also challenges migration studies' anthropogenic focus on the socioeconomic and political drivers of human movement. *Gun Island* shows that climate change, pollution, and other human activity have rendered the maritime animals' knowledge of local conditions less relevant, so that they have to relocate to other habitats, change their migration routes, or risk extinction. Changing weather patterns and shifts in flora and fauna similarly make the local knowledge of farmers and fishers in the Sundarbans obsolete, thus contributing to economic deterioration and producing outmigration. This emphasis on links between the economy and climate as forces of migration contributes to a developing view in migration studies that characterizes global warming as a sociocultural

construct that intersects with and exacerbates economic and political drivers of human mobility (Parsons 2021; Abel et al. 2019, 239–241).

Migration studies scholars' longstanding attention to socioeconomic factors could also enrich the novel's attempt to characterize the complex push and pull factors that shape contemporary Mediterranean migration. Besides climate change, the novel gestures toward a number of other causes when it describes the blue boat filled with migrants as "a symbol of everything that's going wrong with the world—inequality, climate change, capitalism, corruption, the arms trade, the oil industry" (Ghosh 2019, 218). *Gun Island* repeatedly critiques a specific aspect of colonialism and capitalism, namely, the quest for profit that has driven the historical and contemporary sea voyages it references—by the gun merchant in the context of seventeenth-century colonial trade, by European colonial powers that conducted the oceanic slave and indentured "coolie" trade, and by contemporary human traffickers who smuggle migrants to Europa via the Mediterranean Sea. But this emphasis on historical continuities between the colonial and contemporary world glosses over the changing roles of nation-states in the procurement and acceptance of nonlocal labor. The acquisition, recruitment, and transportation of people by slave traders, labor contractors, or shipping companies usually occurred with the permission of or in tandem with European empires or (settler) colonial nation-states. After nation-states passed laws restricting large portions of labor migration (particularly those most needed in labor-intensive industries), however, traffickers began smuggling migrants in explicit opposition to national governments and their restrictive immigration laws and border enforcement policies.

While the degree to which climate change is contributing to human migration is still under debate, the novel's emphasis on greed—and on the climate dimensions of mobility—also glosses over the direct connection between the immense growth in inequality during the latest, neoliberal phase of capitalism, climate change, and the worldwide rise in human migration. This includes the largest migration via the Mediterranean, which is from Syria, Afghanistan, and Iraq. In the case of Syria, in particular, the implementation of drastic neoliberal reforms under Bashar al-Assad widened socioeconomic disparities; bankrupted the agricultural sector, which, alongside suprasonal droughts, led to migration to urban areas; and rationed welfare and social services in overcrowded cities in ways that exacerbated social conflict. The authoritarian responses to these problems led to violence, civil war, and international migration (Matar and Kadri 2019; Gürçan 2019). Ten years after the beginning of the crisis, economic deterioration has impeded the reconstruction of the country, further impoverished large portions of the population, and led to massive food insecurity, thus rendering even more people potential migrants.

In response to the surge in migration, European governments have tightened their immigration laws and militarized their land and sea borders, which only helped to make ever-larger numbers of migrants dependent on multinational, profit-driven smuggling operations that can navigate the circuitous and dangerous routes to the Global North. Instead of targeting the profit motives of human traffickers, which is also a common trope in conservative political rhetoric, it is necessary to criticize the continued global dominance of neoliberal ideologies, economics, and politics. These have led nation-states in the Global North to invest considerable resources into militarizing their land and sea borders to prevent migrant mobility—which leads to the growth in human trafficking networks in the first place—rather than addressing socioeconomic inequalities that influence how the effects of climate change are experienced differently in various parts of the world, where they may end up becoming additional push factors for human migration.

The growing restrictions that governments place on popular migration routes are also meant to transform natural environments, such as oceans, into obstacles and deterrents to human migration. The novel employs the uncanny as a literary device to speculate on how multispecies life and mobility in these locations can aid human migration and arrival in the Global North, especially if migrants (and immigration rights proponents) understand their connection to the plight of nonhuman lifeforms in the era of climate change. While *Gun Island* asks the blue and oceanic humanities to pay more sustained attention to human migration via the Mediterranean, it also calls on migration studies to consider the nonhuman world, including climate change and nonhuman mobility. The novel suggests that, as migration studies scholars are beginning to attend to the climate dimensions of human movement, they may want to advocate equally for migrants' right to mobility and for the mitigation of the effects of climate change on the nonhuman world, some of which manifest in movement. In addition to demanding a wider variety of options for legal migration for those who need to move or relocate, scholars in the field may also want to consider supporting more sustainable and ecological justice policies that aid the nonhuman world while also increasing human resilience to climate change so that people can stay in their areas of origin.¹¹

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¹ The understanding of climate change as a driver of human mobility also informs the United Nations Framework Convention on Climate Change, particularly the Warsaw International Mechanism on Loss and Damage (Baldwin, Fröhlich, and Rothe 2019, 290).

² A 2015 publication by climate researcher Collin Kelley and colleagues argued that climate change triggered the Syrian crisis. However, other scholars have argued that the evidence linking climate change to conflict in Syria is unreliable (Abel et al. 2019, 241).

³ The novel stands out from Ghosh's other work because of its focus on contemporary Mediterranean human movement. His early fiction examines displacement after India's Partition and migration from the Indian subcontinent and Arab countries to the Gulf, the US, and the UK. *The Hungry Tide* (2004) attends to the climate dimensions of the 1979 massacre of Bangladeshi refugees in India and anticipates some of the themes in *Gun Island* by focusing on the migratory patterns of dolphins and highlighting the threats of climate change in the Sundarbans (Jones 2019; Grewe-Volpp 2019). The first novel in the Ibis trilogy, *Sea of Poppies* (2008), fictionalizes intersections between the Atlantic slave trade and the movement of Indian laborers to the Caribbean in the context of the opium trade (Arora 2012; Dhar 2017).

⁴ Scholars in the subfield of Mediterranean studies have similarly become interested in both the histories of oceanic exchanges and the ocean's relationship to climate events and human activity (Iovino 2017) while only somewhat attending to contemporary Mediterranean migration.

⁵ While literary scholarship of the 1980s and 1990s was mostly interested in questions of immigrant assimilation and (transnational) identity formation, emerging work also examines representations of mobility, such as Caribbean migration to the United States (Méndez 2012; Pérez Rosario 2010) and African migration to France via the Mediterranean (e.g., Thomas 2013). While critical oceanic studies have yet to engage more centrally with contemporary Mediterranean migration, Elizabeth DeLoughrey's (2019b) seminal work explores representations of oceanic migration from the Caribbean to the United States and from the Dominican Republic to Puerto Rico. In her first book, *Routes and Roots* (2009), DeLoughrey connects representations of contemporary Caribbean migration to precolonial migration narratives.

⁶ The novel's focus on the militarization of sea borders against migrants expands on Elizabeth DeLoughrey's (2019a and 2019b) call for greater attention to the militarization of the oceans since the Cold War.

⁷ Serenella Iovino (2016) discusses changes in the Venice lagoons from an environmental humanities perspective. Sea levels in Venice have been rising faster than in past, and more frequent and extreme storms have produced higher tides that submerge ever-greater parts of the city (Lavanga 2020).

⁸ The novel only briefly references the plight of a Bangladeshi migrant who almost drowned in a dilapidated boat during his Mediterranean voyage to Italy. He had flown from Bangladesh to the Arab Emirates and then went to Libya, where people smugglers kidnapped, tortured, and sold him to work gangs. Here, the novel may be referencing the fates of migrants such as those trapped in connection houses in Libya after Italy struck a deal with people smugglers in 2017 to prevent migrant departures. To replace their lost revenue, the smugglers extorted migrants for more money and sold them for forced labor (Camilli and Paynter 2021).

⁹ In 2021, Salvini went on trial for a 2019 incident in which he refused to let a Spanish migrant-rescue ship dock in an Italian port, keeping the migrants on board for days. While it did not completely reverse Salvini's policies, the new Italian government that took office in September 2019 lowered potential fines for NGO search and rescue crews that fail to comply with Italian authorities.

¹⁰ The novel also shows that other animal species have changed their habitats in response to climate change, with overwhelmingly negative effects on humans and local environments. Bark beetle infestations in the Oregon forests have worsened the threat of increasingly dryer forests and more frequent wildfires; the move to California and Venice, respectively, of the deadly yellow-bellied sea snake and the poisonous brown recluse spider threatens human health; and the shipworms that are invading Venice because of warming lagoon waters are "literally eating the foundations of city" (Ghosh 2019, 251), similar to the crabs in the Sundarbans that are burrowing into embankments.

¹¹ In 2010, the United Nations Framework Convention on Climate Change's Conference of Parties (COP) 16 formalized a view of migration as a form of adaptation to climate change. Article 50 of the 2015 Paris Climate Change Agreement calls for "integrated approaches to avert, minimize and address displacement related to the adverse effects of climate change" (Pisarevskaya et al. 2020, 613–614). However, intergovernmental efforts that started in 2016 under the auspices of the United Nations to create frameworks recognizing all forms of migration, including those shaped by climate, have stalled.