

The Fire Ants of Hurricane Harvey

Displacement and Belonging in Houston

Nathaniel Otjen

Abstract:

This article examines news and social media representations of the red fire ant, *Solenopsis invicta*, that were published during the historic flooding of Houston by Hurricane Harvey in late August 2017. I argue that the narratives produced about the fire ants in popular media perpetuate damaging and inadequate explanations of the species' role in Houston's imagined and material cityscape. In order to understand the various media responses to the ants, I provide a naturalcultural history of the fire ant in the southern United States and offer a literary analysis of these media representations. Arguing that the historical and contemporary discourses about *S. invicta* fail to theorize this creature's role in socio-material landscapes, I propose two generative models for interpreting and understanding the fire ants in Houston that, when read together, offer a necessary framework for future cohabitation. Revisiting Gilles Deleuze and Félix Guattari's notion of the assemblage, I argue that the fire ants caught up in the floodwaters typify a contemporary assemblage associated with risk. I then use Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt's twin framework of "Ghosts" and "Monsters" to examine the imagined erasure of fire ants from the Houston landscape and the subsequent horror their physical presence evoked. Like a ghost, *S. invicta* points to our forgetting, and, like a monster, this species forces humans to consider the realities and possibilities of multispecies togetherness. Read alongside one another, the assemblage and Ghosts and Monsters chart a collaborative future of multispecies collectivity that offers ways of thinking and being in the difficult spaces created by contemporary risk society.

Key Words: Hurricane Harvey, assemblage, ghosts and monsters, fire ants, Houston

The Fire Ants of Hurricane Harvey Displacement and Belonging in Houston

Nathaniel Otjen

Just hours after making landfall on the Texas coast, Hurricane Harvey became associated with historic and unprecedented flooding. Indeed, images of the storm circulated through news outlets depict flooded streets, immersed homes, and swirling water. The disaster narratives about the hurricane support this view, emphasizing the ceaseless rain, record amounts of precipitation, and historic flood levels. While referred to as a hurricane, Harvey lodged itself in the national imaginary as a flooding event. The storm made landfall on August 25, 2017, and remained in southeastern Texas for five days. During this time, Harvey dumped a record 48.2 inches of rain near Houston (Di Liberto 2017). This sprawling metropolis of six million inhabitants quickly became the epicenter for storm reporting and national concern. Stories and photographs from Houston feature dirty sediments, prismatic petroleum slicks, industrial wreckage, and household debris either floating or immersed in the floodwaters. However, one

floodwater spectacle, in particular, caught local and national attention: floating rafts or spheres of red fire ants.¹

On August 27 videos, images, and stories featuring colonies of fire ants suspended in murky floodwater began emerging on social media platforms, including *Twitter* and *Facebook*. A day later, news websites such as *The Verge* and *Wired* began circulating these images and stories, which subsequently inspired larger news stations to feature narratives about the spectacle of these flood survivors. From August 28-31 nearly all the major American media outlets covered the phenomenon, including *NBC*, *The Washington Post*, *Forbes*, *Business Insider*, *FOX News*, *USA Today*, *HuffPost*, *NPR*, and *The Atlantic*. Individuals posting on social media and journalists reporting on behalf of news networks described the masses of insects using the language of awe and disbelief. These flood survivors became a spectacle of public intrigue. The ants were most often portrayed as yet another nuisance that Texans had to deal with after the flooding subsided. Most journalists and social media users reported on the fire ants as a safety concern for the flood-ravaged residents of Houston, discussing the potential hurt a fire ant could inflict if the creature stung. The ants were associated with the unusual, strange, and alien. Terms such as “creepy,” “nightmarish,” “aggressive,” “sneaky,” “unsettling,” “disturbing,” and “horrifying” were used to describe the fire ants. In the midst of record flooding and displacement, the red fire ants came to signify

¹ Evolving in a flood-prone region of South America, the red fire ant has acquired the ability to float on water. Entire colonies will self-assemble into “rafts” and can float for months. The ants lock mandibles and legs, joining together as a single interconnected fabric. Their waxy bodies repel water and trap air bubbles, which enables them to float. The raft itself “simultaneously provides cohesion, buoyancy, and water repellency” (Mlot et al. 2011, 7669). Once assembled, the ants circulate within the raft, exchanging positions as it floats. Worker ants coalesce around the queen who remains protected in the center of the floating mass of ant bodies (Mann 2012). Therefore, “[a] floating ball has two obvious adaptations—the trapped air provides buoyancy and the rotation of the ball prevents any individual from spending too much time underwater” (Taber 2000, 24). As we will see, floating in large rafts is a primary way red fire ants colonize new regions.

the unsettling and unknown world of climate change catastrophe. Harvey released rain on a magnitude previously unknown, setting a record for the most rainfall ever deposited from a single storm in the continental United States (Brodwin and Gould 2017). Cognizant of the historic order of the storm, reporters and local Houstonians imparted their feelings of uncertainty and despair onto the floating fire ant colonies.

Inundated by record levels of rainfall, Houston became an apocalyptic landscape of disaster and risk. Homes, interstates, and livelihoods were submerged. The swirling floodwaters carried dangerous debris and toxins.² And, to make matters worse, clusters of fire ants lurked amid the destruction. Houston, in short, reflected the worst effects of a contemporary risk society. As Ulrich Beck explains: “In advanced modernity the social production of *wealth* is systematically accompanied by the social production of *risks*” (1992, 19). Policymakers, business capitalists, and political structures attempt to manage the risks, consequences, and hazards produced by industrial modernity. A risk society, therefore, marks a shift from the logic of wealth production to the logic of risk management.

As home to the American petrochemical industry, Houston has long managed industrial hazards and participated in risk society. Moreover, with the intensification of climate change, global risks have become amplified. This magnification of global hazards represents a defining feature of contemporary risk society, according to Beck (1992, 21). Strengthened by the moisture-heavy atmosphere characteristic of global warming, Hurricane Harvey produced a multitude of hazards.³ Houston, in short, has become a place characterized by risk, a landscape of catastrophe. Perhaps most terrifying, however, the feeling of uncertainty defines the contemporary risk society of

² See Kaplan and Healy 2017; Griggs et al. 2017; Hersher 2017 for a list of specific dangers.

³ For research on climate change that predicts an increased future frequency and intensity of tropical storms and hurricanes, see Meehl et al. 2007; Knutson et al. 2010.

Houston. According to Beck, “in the risk society the unknown and unintended consequences come to be a dominant force in history and society” (1992, 22). Amid the polluted floodwaters and visible devastation caused by Harvey, reporters and social media users reflected on the unknown risks of industrial capitalism. The floating rafts of fire ants exposed human vulnerability and pointed toward a difficult, and unknown, future of multispecies togetherness. Yet, like capitalist agents that seek to control hazards, the individuals reporting on the ants and destruction sought to manage the perceived risk of dangerous fire ant colonies. They informed fellow Houstonians to avoid the ants at all costs, used language of isolation to distance themselves from these alien outsiders, and repositioned the human as the dominant species in this battered landscape of hazards and uncertainty.

Influenced by recent critical animal studies and urban studies scholarship that examines how cities stage encounters between humans and more-than-human others (Holmberg 2015; Owens and Wolch 2017), this article studies news and social media representations of the red fire ant, *Solenopsis invicta*, that were published during the historic flooding of Houston in late August 2017. I argue that the narratives produced about the fire ants in popular media perpetuate damaging and inadequate explanations of the species’ role in Houston’s imagined and material cityscape. In order to understand the various media responses to the ants, I provide a naturalcultural history of the fire ant in the southern United States and offer a literary analysis of these media representations. Arguing that the historical and contemporary discourses about *S. invicta* fail to theorize this creature’s role in cultural and material landscapes, I propose two generative models for interpreting and understanding the fire ants in Houston that, when read together, offer a necessary framework for future cohabitation. Revisiting Gilles Deleuze and Félix Guattari’s notion of the assemblage, I argue that the fire ants caught up in the floodwaters typify a contemporary assemblage associated with risk. I

also use Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt's twin framework of "Ghosts" and "Monsters" to examine the imagined erasure of fire ants from the Houston landscape and the subsequent horror their physical presence evoked. Like a ghost, *S. invicta* points to our forgetting, and, like a monster, this species forces humans to consider the realities and possibilities of multispecies togetherness. Read alongside one another, the assemblage and Ghosts and Monsters chart a collaborative future of multispecies collectivity that offers ways of thinking and being in the difficult urban spaces created by contemporary risk society.

A Naturalcultural History of *S. invicta*

Red fire ants, like other "invasive" species, are "creatures of empire" (Haraway 2016, 15), participating in human imperial expansion while simultaneously creating their own insect "empires." The first red fire ants arrived in the United States via an Argentinian trade ship. Concealed either in agricultural products or ballast soil removed from a riverbank, five to thirteen queen ants along with several members of their colonies from the rainforests of northeastern Argentina arrived in the port city of Mobile, Alabama, at some point between 1933 and 1945 (Tracy 1995; Taber 2000; Buhs 2004; Ascunce 2011; Mann 2012). Brought to the United States via global trade and transportation systems, these "creatures of empire" encountered a welcoming new landscape. Early myrmecologists, including E.O. Wilson, were quick to study the newcomers. These ant specialists, however, conflated the red fire ant with the black fire ant (another "invasive" species that arrived in the U.S. several years before our protagonist), mistakenly believing that the two ants belonged to the same species. Recognizing this error, biologists soon distinguished between the two, naming the black fire ant

Solenopsis richteri and the red fire ant *Solenopsis invicta* (Tracy 1995; Taber 2000).⁴ “Invicta” means “the unconquered” and “solenopsis” means “pipe face” or “pipelike” because the ant has an elongated head (Taber 2000, 12). The new scientific moniker for the red fire ant, therefore, literally translates to “the unconquered pipe face.” *S. invicta* powerfully evokes the language of imperial domination. This scientific name secured the red fire ant’s status as a creature of empire.

Following its initial introduction in coastal Alabama, *S. invicta* began moving north and westward. As Charles Mann (2012) puts it: “From the ant’s point of view, it had been dumped into an empty, recently flooded expanse. *S. invicta* took off, never looking back.” Extending an average of six miles per year, the red fire ant moved across the South in two primary ways: either by flying in the air or by floating on floodwater (Taber 2000, 23).⁵ The rate of spreading soon quickened, however, with the post-World War II housing, transportation, and industrial boom. The Southern landscape was transformed into a patchwork of sprawling urban developments, a knotted system of interstate highways, and a vast expanse of industrial farmland.⁶ *S. invicta* capitalized on these human modifications to the landscape, flourishing in the disturbed spaces. Indeed, human disturbances such as road building, clear-cutting, urbanization, and flooding all helped the red fire ant extend its range (Taber 2000; Buhs 2004; LeBrun et al. 2012). According to Joshua Buhs, the ant “succeeds best . . . in open or disturbed

⁴ *S. richteri*, or the black fire ant, never had the opportunity to spread across the U.S. South and today remains only in Alabama and Mississippi. *S. invicta* dominated this less “aggressive” species, suppressing its populations and restricting its geographic territory (Tracy 1995, 824).

⁵ Flooding is perhaps the most efficient way for fire ants to colonize new territories. Floods significantly increase fire ant population densities which enables colonies to establish themselves in new regions (LeBrun et al. 2012, 892).

⁶ This period of industrial expansion marked the birth of contemporary risk society in the South. Human modifications to the landscape altered drainage patterns; newly constructed factories produced and discharged significant quantities of waste; and petrochemical and petroleum refining industries began emitting carcinogenic toxins.

habitats” (2004, 12). Within a decade of its introduction, *S. invicta* had spread across twenty million acres in the South (Buhs 2004, 1). By 1950, the ant had arrived in Mississippi, and by 1957 it had spread throughout Louisiana and into southeastern Texas at a rate of thirty miles per year (Taber 2000, 220; Buhs 2004, 33). By the mid-1990s, the red fire ant inhabited 250 million acres in thirteen southern states (Tracy 1995, 824). Within the next decade, *S. invicta* is expected to occupy the West Coast and much of Mexico in addition to the entire southern United States (Taber 2000, 216-17).

This rapid colonization of the southern landscape brought the red fire ant into contact with millions of people. The ants built mounds in yards, along roads, and in agricultural fields. These mounds were as large as three feet high and three feet wide, and housed colonies of 220,000 workers (Taber 2000). Yards, roads, and fields across the South became interspecies contact zones where humans and fire ants fought for belonging. With their ability to inflict a painful sting upon the human body, to consume crops, to kill and eat livestock and wildlife, to build earthen domes in agricultural fields, and to cause property damage, the red fire ant was publicly labeled a “noxious pest” (Taber 2000, 11). Ants, as Charlotte Sleigh notes, “have held a peculiar terror for humankind. Besides their devastating economic impact, there is something uniquely nasty about their inhuman form of attack, their countless number, and their irreducibly mass-nature with no individualization whatsoever. . . . For the squeamish, their alien body form perturbs” (2003, 87). Within just a few years of *S. invicta*’s arrival in the South, humans began strategizing and organizing against these “invaders.” The “fire ant wars,” as Buhs calls the actions taken to eliminate fire ants from the 1940s to the present, were waged in agricultural fields, in state and federal legislature, in scientific journals, and in corporate boardrooms. Mississippi was the first state to enact eradication plans, dumping toxic pesticides such as dichloro-diphenyl-trichloroethane

(DDT), chlordane, toxaphene, and gamma benzene hexachloride on the successful newcomers (Taber 2000, 18). In 1958 Congress became involved, approving the Federal Imported Fire Ant Quarantine program which granted funding to fire ant eradication projects in the South (Taber 2000, 217). And most recently, Texas has pledged significant amounts of money and time in an attempt to limit the fire ant's success (Taber 2000, 217). Yet, despite the militarization against *S. invicta*, the ant is "here to stay" (Taber 2000, 16). Indeed, as Taber notes: "[T]he prospect for eradicating the red imported fire ant seems bleak" (2000, 225). The fire ant will continue to spread, moving into new territories as climate change increases the size and frequency of flooding events and warms northern latitudes.⁷

While the red fire ant has largely been deemed a "noxious pest" in the southern United States, myrmecologists and fire ant experts have recently begun to elucidate this species' many virtues. Taber, for example, admits that "alterations of native ecosystems by new arrivals are not intrinsically bad" (2000, 17) and offers several examples of the benefits that *S. invicta* provides humans. The red fire ant kills boll weevils in cotton fields, replenishes local soils with valuable nutrients, aerates soils, prevents erosion, and provides necessary biocontrol for crops (Taber 2000). "All in all," Taber remarks with reluctance, "the services provided by the red imported fire ant go a long way toward justifying its overall assessment as a nuisance instead of a genuine pest" (2000, 205). Rachel Carson, in *Silent Spring*, also discusses these benefits, refusing to further vilify the red fire ant in the South (2002, 163-64). Notwithstanding that the "benefits" provided by *S. invicta* are problematically framed in relation to human gains and fail to highlight the unique ways of being and doing

⁷ *S. invicta* will also continue to spread around the world. In fact, the red fire ant can now be found on every continent in the Global South except Antarctica. Due to international shipping from ports in the southern United States, *S. invicta* has been introduced at least nine separate times to foreign countries (Ascunce 2011, 1066).

practiced by this species, the positive attributes of the red fire ant help deconstruct this creature's image as a harmful invader and complicate the easy narrative of the ant as pest.

This brief naturalcultural history of the red fire ant in the American South reveals the prominent position this more-than-human being occupies in a collective regional and national imaginary. As Buhs explains, the fire ant has become “an entrenched and ubiquitous denizen of the Sun Belt” (2004, 9). Indeed, the red fire ant has written itself into Southern folklore and culture. The human history of the post-WWII South is permanently entangled in the history of *S. invicta*, and vice versa. The fire ant followed humans across the South, altering the landscape and the lives of southerners. People, in return, altered the landscape and the lives of fire ants, helping them flourish while dampening their success. Red fire ants, as Donna Haraway puts it, “both do great harm and sustain whole worlds” (2016, 125). Today, *S. invicta* “has a fascination and importance—medical, agricultural, and ecological—unrivalled by any other” (Taber 2000, xv). Thanks to federal, regional, and state eradication programs that required significant scientific inquiry and public advertising, *S. invicta* is now the most-studied ant species in the world and the “most famous” ant in the United States (Taber 2000, 12). The red fire ant has captured attention unlike any other ant species.

Fire Ant Discourse: media representations during Hurricane Harvey

Social media users and journalists portrayed the red fire ants floating in the Houston floodwaters as a dangerous threat to public health and safety. While there were no reported attacks on humans, every media narrative depicted the insect flood survivors as a menace that caused additional grief, suffering, and worries for the flood victims of Hurricane Harvey. The individuals reporting on the fire ants drew from a rich southern cultural imaginary that has long considered *S. invicta* a damaging pest. In fact, the

image of floating fire ants has fascinated Americans since the species' initial introduction in the South. The earliest recorded incident occurred in 1957 when an entomologist spotted colonies of red fire ants floating on the Alabama River (Taber 2000, 23). As the 2017 profusion of news articles indicates, Americans still find the image striking. In today's cultural landscape, however, technologies of communication and contemporary cultural attitudes influence the representations of *S. invicta*.

The most common narrative practice employed by those reporting on the fire ant spectacle was to ideologically and geographically distance *S. invicta* from the human, which, in turn, erased the red fire ants' claim to and history in the Houston landscape. News stories used the terms "invasive" (Loria 2017; Montanari 2017; Zhang 2017) and "imported" (Brulliard 2017) to describe the ants. An immigrant status permanently defines this creature. Unlike the "native" human residents who belong in Houston, the ants represent a foreign troublemaker who can never truly belong. And, as Sleigh points out, both terms — "invasive" and "imported" — link the southern red fire ant to the violent language of "illegal" human immigration. The fire ant's "rise to prominence . . . coincided with that of unwanted human immigrants, and similar language was used to describe both sets of problems" (Sleigh 2003, 132-33). If this language of separation is not enough, one news article reminds us that the red fire ants are "thoroughly-detested creatures" (Rainey 2017). Describing *S. invicta* as a permanent outsider, a thoroughly un-American insect, privileges human inhabitants, justifies the continued violence against this species, and fails to acknowledge the red fire ant's contributions to the Texas landscape. Perhaps most problematic, however, this language erases the fire ant's history in the South. As one article concludes: "Floating fire ants aren't a particularly new phenomenon, but that doesn't make it any less horrifying. Have a little mercy, won't you, Mother Nature?" (Madani 2017). While the story references the historical presence of *S. invicta*, it quickly erases this presence

by bundling both the fire ant and the record flooding under the naturalizing category of “Mother Nature.” This categorical conflation ignores the historical processes that led to the fire ant’s presence in the Houston region, and it disregards the role of climate change and the development of risk society in creating this disaster. One article actually normalizes *S. invicta*’s presence, but immediately distances this species from the human and rejects their companionship: “Yes, flotillas of fire ants are a real thing that happens in Houston—and elsewhere—when it floods. This is how the clever little insects stay afloat and stay alive during their own life-threatening emergency situations. Bless them. They’re just trying to make it, like the rest of us. Even if they’re horrible little ankle-biters” (Shilcutt 2017). The phrase “horrible little ankle-biters” demeans the ants, casting them as childish nuisances lost in the established, adult world of humans. The fire ant is othered and their history in this urbanscape becomes erased.

To describe the floating spheres of red fire ants, the news stories and social media reports made use of two popular genres: horror literature and the newspaper advice column. Like all horror narratives, the reports cultivate fear and hyperbolize threats. The floating ants are called “terrifying” (Brulliard 2017) “scary” (Farokhmanesh 2017), “creepy” (Hauser 2017), “nightmarish” (Kennedy 2017; Madani 2017; Hauser 2017; Alfonso III 2017), “sneaky” (Hauser 2017), “aggressive” (Ingraham 2017, Hauser 2017), “an unusual risk” (Loria 2017), “disturbing” (Madani 2017), “venomous” (Loria 2017; Rainey 2017; Ingraham 2017), “unsettling” (Madani 2017), “dangerous” (Molina 2017; Shilcutt 2017), “horrible” (Madani 2017), “a menace” (Rainey 2017), “a common scourge” (Montanari 2017), a “safety concern” (Rainey 2017), and “one of Harvey’s creepiest storylines” (Alfonso III 2017). In short, *S. invicta* is a menace out to attack the human.⁸ The ants are the villains of this risk

⁸ Reviewing 137 articles about insects published in forty magazines from 1970 to 1980, Wayne S. Moore et al. found that only 20% of the articles discussed these creatures using positive language. 80% of the

society horror story. Nearly all the reporters writing about the buoyant spheres of ants imagine entire colonies climbing onto the vulnerable human body and mercilessly attacking. One reporter, in particular, dramatizes this imagined scenario: “They [the red fire ants] sting. They’re venomous. And they’re looking for any dry place — from rescue boat, to backpack, to pant leg — to set up new housekeeping” (Rainey 2017). Another strikes fear into the reader, explaining that “a whole colony can deliver real damage” (Loria 2017). And yet another explains that it can be “particularly scary” if rafts of fire ants “choose to board a temporary sanctuary someone has taken refuge on” (Farokhmanesh 2017). In these examples, the ants intentionally seek out the human body to inflict pain and suffering. The favored imagined contact zones include boats, debris piles, and roofs; *S. invicta* will attack when the human is the most vulnerable.

As “the latest menace confronting survivors of Hurricane Harvey” (Rainey 2017), the red fire ants must be stopped, according to these journalists. Like any good advice columnist, they offer suggestions and tips for destroying the insect “menace” and resolving the relationship woes of humans and ants. The two most common pieces of advice are to avoid the rafts of suspended ants and to drown them with a solution of dish soap and water. Readers are told to “spray the ants with dish soap to break down their waxy rafts” (Farokhmanesh 2017). They are also advised to give the ants “a wide berth” (Kennedy 2017), to “steer clear” from their colonies (Loria 2017), and to “stay far, far from the burning insect boats” (Brulliard 2017). The proposed advice aims to bring about a denouement for this horror story and resolve the unsettling human-fire ant relationship (in favor of the human, of course).

Taken together, these media representations of the fire ants reveal several pressing worries about contemporary American life. The fears expressed through

magazine articles “stressed the negative impacts of insects” (1982, 465). Insects in general, it appears, are figured in negative ways within popular media.

popular media render visible the horrors of the contemporary environmental moment. This subgenre of “ecohorror,” Christy Tidwell argues, “reflect[s] real anxieties about the natural world and its existence outside of human control” (2018, 115). Ecohorror, according to Stephen Rust and Carter Soles, “assumes that environmental disruption is haunting humanity’s relationship to the non-human world” (2014, 510). Ecohorror narratives about the fire ants engage and expose larger societal fears about environmental collapse and the eventual demise of humanity. More specifically, the fire ant narratives reveal a fear of invasion, a fear of vulnerability, a fear of the human inability to adapt to changing climate conditions, and a fear of risk society itself. *S. invicta* is well adapted to this landscape of catastrophe and even flourishes in these conditions while the human is vulnerable and weak. The human, to borrow Stacy Alaimo’s material feminist framework, becomes *exposed* to the vulnerabilities of contemporary risk society.⁹

Journalists, as gatekeepers of a national imagined community, are not usually fond of promoting the vulnerabilities of the human. Indeed, under the auspices of nationalism, they work hard to suppress the exposedness of individuals. It should be no surprise, therefore, that the media representations of fire ants in the wake of Hurricane Harvey aim to stifle human exposure and vulnerability. In particular, reporters on social media and national news deny the fire ants agency in order to reaffirm human autonomy, subjectivity, and domination. Record-breaking precipitation amounts, historic flooding, and the success of *S. invicta* — a species long despised in Texas — stripped away all illusions of human control. Yet, by denying the ant agency, humans could restore some of theirs. The first step in restoring lost agency involves *decentering* the fire ant. The second step involves *recentering* the human.

⁹ For more on the concept of exposure, see Alaimo 2016.

The initial step is accomplished by denying the fire ants agency and questioning their success. One journalist deftly practices this move while describing the construction of fire ant rafts: “The floodwaters lift the ants from their anthills on the ground, and clinging together, they are capable of drifting for miles until they find dry land to re-establish a colony on” (Kennedy 2017). While the image of ants “clinging together” may appear to cultivate a sense of shared empathy for these creatures, the author emphasizes how the ants’ rafts are capable of aimlessly “drifting for miles.” *S. invicta* lacks all agential capacity; instead, the floodwaters are responsible for the process of raft construction. The waters “lift” the ants from their lowly anthills and, in shock, the ants happen to cling together. The floodwaters then carry the ants to dry land where they will blindly reestablish a colony. Another journalist confirms *S. invicta*’s reactionary status, quoting an entomologist who claims the ants are “just passively floating along” (Farokhmanesh 2017). However, as Deborah M. Gordon has shown, fire ants react to changing conditions such as flooding with spontaneous collective behavior and robust forms of collaboration (2017, M126).¹⁰ The red fire ants possess their own forms of agency, but are denied this ability to act independently.

Once the ants have been stripped of their agential attributes, the human can then reassert themselves. One way the human becomes recentered (which we have already seen) is by killing the floating ants. Another technique, this one rhetorical and discursive, depicts the red fire ant as a peripheral nuisance. The ants are “one more thing to worry about” for the residents of Houston (Farokhmanesh 2017); they are “yet another hazard in Houston’s flooded streets” (Hauser 2017). By recasting *S. invicta* as just another burden that must be overcome, these narratives recenter the human as the dominant creature inhabiting this damaged landscape. One reporter writes: “As if the

¹⁰ See also Mlot et al. 2011.

catastrophic floods in Houston haven't done enough damage, people are now reporting large colonies of fire ants floating on the rising water" (Madani 2017). Another declares: "To add more drama on top of an already difficult problem, Texas residents dealing with flooding now need to worry about running into piles of stinging insects" (Montanari 2017). And yet another writes: "In addition to widespread suffering and devastation, Hurricane Harvey has brought a plague of floating fire ants to the Houston region" (Ingraham 2017). This special brand of American individualism, postmodern skepticism, and Internet hyperbolization render the red fire ant an obnoxious, tangential concern. The fire ant is denied agency in order to reaffirm the fantasy of human subjectivity and control.

It should now be clear that the media representations of these fire ants perpetuate damaging and inadequate explanations of this creature's place in Houston's ideological and material landscape. More generative models must be proposed in order to adequately interpret and understand the role of *S. invicta* in Houston. Deleuze and Guattari's theory of the assemblage provides an *entrepôt* into a generative realm of thinking with, not against, the fire ant.

Assemblage

In *A Thousand Plateaus: Capitalism and Schizophrenia*, Deleuze and Guattari provide a rhizomatic, lateral, and tentacular way of thinking about social and material being. The world theorized by Deleuze and Guattari is composed of positivities and assemblages. This final concept — the assemblage — is both a physical collection of bodies (i.e. the "machinic assemblage") and a collection of ideas about these bodies (i.e. the "collective assemblage of enunciation"). An assemblage, therefore, is at once a collection of "content" and "expression" (Deleuze and Guattari 1987, 89). Content and expression exist on a horizontal axis that flattens hierarchical difference. Existing

on a vertical axis are both territorialized (or reterritorialized) boundaries that give the assemblage stability and also the “cutting edges of deterritorialization” that simultaneously hold the assemblage together and disperse the collection outward and away (Deleuze and Guattari 1987, 89). The assemblage, in summation, is tetravalent; it is characterized by *content* and *expression* on a horizontal axis, and *(re)territorialities* and *deterritorialization* on a vertical axis. For Deleuze and Guattari, the assemblage is an intermingling of social, material, and semiotic flows: “There is no longer a tripartite division between a field of reality [e.g. the world] . . . and a field of representation [e.g. media coverage] . . . and a field of subjectivity [e.g. the author]. . . . Rather, an assemblage establishes connections between certain multiplicities drawn from each of these orders” (1987, 23). The floating fire ants of Houston can be read as an assemblage — a collection of bodies and representations stabilized by material and discursive boundaries and crosscut by deterritorializing processes.

The fire ants suspended in the wreckage of Hurricane Harvey are defined by a set of territorialities and boundaries.¹¹ In this case, the ants inhabit the Houston landscape because systems of global capitalism brought them to the American South, human development moved them westward into Texas, the region’s warm climate provides favorable living conditions, state and national extermination regimes failed, larger flooding events driven by risk society carried them west, and the ants’ own success at colonizing new landscapes enabled them to flourish. This collection of territorialities created the geographic configuration of fire ants witnessed during

¹¹ In the subsequent analysis, I follow Deleuze and Guattari’s recommended procedure for identifying and studying an assemblage. First, I examine the (re)territorialities of the assemblage and then I turn my attention to the lines of deterritorialization. “On the one hand,” Deleuze and Guattari write, “what is the territoriality of the assemblage, what is the regime of signs and the pragmatic system? On the other hand, what are the cutting edges of deterritorialization, and what abstract machines do they effectuate?” (1987, 505).

Hurricane Harvey. The bodily, floating presence of ants in Harvey's floodwaters is determined by the increasing strength of severe weather events caused by intensifying climate change, the ability of *S. invicta* to self-organize, the development and construction of the contemporary blacktopped urbanscape, and the worsening Houstonian, and global, risk society. Finally, the media representations of these insect companions are determined by contemporary technologies and information-sharing platforms, national intrigue and concern, human fantasies of control, and the capitalist urge to increase profits. This constellation of (re)territorialities defined the floating *S. invicta* assemblage.

A series of "cutting edges of deterritorialization" stabilized the assemblage of fire ants and dispersed it outward and away. Perhaps most obvious, the floodwaters deterritorialized the local populations of Houston fire ants, dispersing them to new regions. Additional deterritorializations can also be observed. For example, journalists and social media users manufactured fear and disseminated this message across the United States. The cultivated horror of fire ants, as we have seen, revealed a deep-seated fear of invasion, vulnerability, and risk. In addition, terms such as "invasive" and "imported" distanced the red fire ant from their human companions, generating hatred and animosity toward this species. In this sense, these statements and acts dispersed certain narratives, emotions, rhetorics, and epistemologies outward to the rest of the nation. These edges of deterritorialization also stabilized the assemblage, creating the conditions necessary for such an ideological and material collectivity to exist.

Thinking the floating spheres of *S. invicta* as an interconnected assemblage of bodies and discourses that impacts social and material conditions offers a generative way to read the flooded Houston landscape. The red fire ants, like their human counterparts, are caught up in a posthuman landscape swirling with muddied water,

toxins, industrial and household materials, and other beings. Difference becomes erased within the horizontal, bodily content of the assemblage, and the human becomes exposed to the vulnerabilities of contemporary risk society. This difference, however, is rearticulated in the vertical collection of expressions and ideologies that depict the fire ant as a spectacle, an invasive menace. The assemblage, as a theoretical framework, traces bodily and discursive articulations while identifying the various territorialities that shape, build, and constantly reassemble this dynamic constellation. As we will see, reading fire ants as Ghosts and Monsters can do similar work. This second framework builds upon Deleuze and Guattari's examination of bodies and discourses by paying closer attention to processes of more-than-human worlding.

Ghosts and Monsters

The edited collection *Arts of Living on a Damaged Planet* proposes two frameworks for exploring and surviving the wasted world of modernity. As Tsing and her colleagues argue, studying the ghosts and monsters of the damaged planet offers two potent ways to understand the Anthropocene. They contend that if “[s]uffering from the ills of another species” is “the condition of the Anthropocene for humans and nonhumans alike” (2017, M4), then “[f]ollowing ghosts and following monsters are different ways to know the terrors of the Anthropocene” (2017, M176). The critical venture advanced by Tsing *et al* aims to cultivate an “arts of living,” or to make multispecies flourishing possible during this period of extreme loss. Further elaborating on and developing this twin framework for understanding landscapes of catastrophe we can expand upon the previous reading of media narratives as horror genre by developing the more-than-human thinking propounded by the assemblage, and by postulating a future of multispecies collaboration. Reading the fire ants as both Ghosts

and Monsters offers a productive way to understand Houston's landscape of risk and loss.

Ghosts are the past or forgotten ways of life that haunt contemporary landscapes. As Tsing and her collaborators make clear: "Admiring one landscape and its biological entanglements often entails forgetting many others. Forgetting, in itself, remakes landscapes, as we privilege some assemblages over others. Yet ghosts reminds us. Ghosts point to our forgetting, showing us how living landscapes are imbued with earlier tracks and traces" (2017, G6). While focusing on the red fire ants of Houston certainly privileges their presence and "entails forgetting," it also resurrects *S. invicta* and makes possible a reading of "living landscapes." Indeed, the floating rafts of fire ants can be read as "ghosts." They are agents that "point to our forgetting" and show us how the Houston cityscape is "imbued with earlier tracks and traces." Arising from their hidden, subterranean anthills, entire colonies of red fire ants suspended themselves on the floodwaters. In this moment, the ants became startlingly visible and haunted the public imaginary. Individuals who reported on the flooding called the ants "terrifying," "creepy," "scary," and "nightmarish." The visibility of the ghost-ants dramatically recalled their presence in both the material landscape and ideological fabric of Houston. Previously avoided and ignored, the ants suddenly commanded regional and national attention. People began to recall *S. invicta*'s recent history in the United States and this species' lasting impact in the American South. Perhaps most profound, however, individuals were forced to acknowledge the ants' presence and consider a difficult future of togetherness with this species in a landscape of risk. The sudden realization that humans shared the destroyed landscape of Houston with colonies of adept red fire ants briefly brought into being a more-than-human world. These potentialities, however, were quickly stymied as journalists and social media

users dismissed the ants and rearticulated an anthropocentric fantasy of human control and domination.

Monsters are the unruly beings that terrify the human, and, like ghosts, render visible multispecies connections in damaged places. According to Tsing and her collaborators, “Monsters are the wonders of symbiosis *and* the threats of ecological disruption” (2017, M2). In the first sense, monsters reveal “symbiotic entanglement” and “ask us to consider the wonders and terrors of [this] . . . entanglement in the Anthropocene” (Tsing et al. 2017, M2). In the second sense, monsters are the hazards and threats of contemporary risk society: “Modern human activities have unleashed new and terrifying threats. . . . Modern human activities have also exposed the crucial and ancient forms of monstrosity that modernity tried to extinguish” (Tsing et al. 2017, M2). Monsters, then, “help us pay attention to ancient chimeric entanglements . . . [*and*] they point us toward the monstrosities of modern Man” (Tsing et al. 2017, M2). The media coverage of the floating fire ants coded these flood survivors as “monsters.” *S. invicta* was called “aggressive,” “sneaky,” “unsettling,” “disturbing,” “dangerous,” and “horrible.” The monster-ants revealed the existence of a robust “symbiotic entanglement,” calling attention to their presence in a space otherwise coded human. In addition, the monster-ants revealed “threats of ecological disruption.” Brought to the United States via risky international trade systems and technologies, made visible because of climate change, and inhabiting the highly developed metropolis of Houston, *S. invicta* is a monster of risk society. Viewed as an out-of-control monster of modernity, the red fire ant was systematically poisoned. Yet this species’ presence in the Houston cityscape defies the long history of fire ant extermination projects. *S. invicta* is both a monstrous threat and a wonder of multispecies symbiosis.

The red fire ant is, at once, a ghost and a monster of the city of Houston. This species recalls forgotten histories, multispecies connections, and contemporary threats.

Furthermore, like ghosts and monsters, *S. invicta* complicates the separation between humans and others. The red fire ant occupies a central position in southern identity and cannot be removed from the human. Both human and ant share the Houston landscape. The world of risk will strengthen one species while leading to the demise of the other. Taken together, these two theoretical frameworks — assemblage and Ghosts and Monsters — suggest that it is time to finally imagine a post-risk landscape where both the human and the more-than-human fire ant can practice their own unique ways of doing and being, together.

Conclusion

The floating colonies of fire ants bound in the catastrophic urban landscapes of Houston forced local human inhabitants to recognize a difficult world of multispecies togetherness. However, rather than inhabit the space of exposure and vulnerability created by the record flooding and the presence of fire ants, social media users and journalists rejected this potential moment of reimagination, discursively and rhetorically distanced *S. invicta* from the human, and reinstated *Homo sapiens* as the dominant species within this landscape. Conceptualizing the red fire ants as an assemblage and as Ghosts and Monsters forces us to rethink the multispecies entanglements that exist in the present and to imagine a future of urban cohabitation. While both models disrupt separatist thought and promote multispecies togetherness, each makes a distinct contribution to imagining alternate modes of existence. Reading the fire ants as an assemblage promotes multimodal thinking by demonstrating that socio-material and discursive formations constitute this floating collectivity. Viewing *S. invicta* as Ghosts and Monsters exposes both longstanding and future symbiotic relationships. These theoretical frameworks that point toward and postulate more-than-human becoming(s) encourage the human, in the words of Haraway, to “stay with the

trouble.” Within the damaged landscape of Houston, humans must *stay with the trouble* and learn to coexist with the unloved fire ants. During this era of profound and unrelenting risk, we must make “oddkin” and participate in “unexpected collaborations and combinations” (Haraway 2016, 4) with creatures that make togetherness difficult. The fire ants swept up in Hurricane Harvey’s floodwaters are oddkin. Now we must practice novel acts of becoming with these fellow flood survivors.

Acknowledgments: *I thank Nicolae Morar for his editorial recommendations throughout the later stages of this project and the anonymous reviewer for their helpful suggestions.*

Bibliography

- Alaimo, Stacy. 2016. *Exposed: Environmental Politics and Pleasures in Posthuman Times*. Minneapolis: University of Minnesota Press.
- Alfonso III, Fernando. 2017. "Harvey creates a river of fire ants in Texas." *Houston Chronicle*, 29 August. Accessed 17 November 2017. <http://www.chron.com/news/houston-weather/hurricaneharvey/article/Harvey-fire-ants-texas-river-photo-2159410.php#photo-14016370>.
- Ascunce, M.S. et al., 2011. "Global invasion history of the fire ant *Solenopsis invicta*." *Science* 331.6020: 1066-1068.
- Beck, Ulrich. 1992. *Risk society: Towards a New Modernity*. Translated by Mark Ritter. Thousand Oaks: Sage Publications.
- Brodwin, Erin and Skye Gould. 2017. "Rains from Hurricane Harvey broke 60 years of US continental records — here's why." *Business Insider*, 29 August 2017. Accessed 15 November 2017. <http://www.businessinsider.com/harvey-rain-rainfall-break-record-2017-8>.
- Brulliard, Karin. 2017. "Harvey is also displacing snakes, fire ants and gators." *The Washington Post*, 28 August. Accessed 18 September 2017. https://www.washingtonpost.com/news/animalia/wp/2017/08/28/harvey-is-also-displacing-snakes-fire-ants-and-gators/?utm_term=.c6cf23b7340d.
- Buhs, Joshua Blu. 2004. *The Fire Ant Aars: Nature, Science, and Public Policy in Twentieth Century America*. Chicago: The University of Chicago Press.
- Carson, Rachel. 2002. *Silent Spring: Fortieth Anniversary Edition*. Boston: Mariner Books.
- Deleuze, Gilles and Félix Guattari. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. Translated by Brian Massumi. Minneapolis: University of Minnesota Press.
- Di Liberto, Tom. 2017. "Reviewing Hurricane Harvey's catastrophic rain and flooding." *NOAA*, 18 September 2017. Accessed 15 November 2017. <https://www.climate.gov/news-features/event-tracker/reviewing-hurricane-harveys-catastrophic-rain-and-flooding>.
- Farokhmanesh, Megan. 2017. "Here's how to deal with those clumps of floating fire ants in Houston." *The Verge*, 29 August 2017. Accessed 18 September 2017. <https://www.theverge.com/2017/8/29/16221842/hurricane-harvey-houston-fire-ants>.
- Gordon, Deborah M. 2017. "Without planning: The evolution of collective behavior in ant colonies." In *Arts of Living on a Damaged Planet: Ghosts and Monsters of*

- the Anthropocene*, edited by Anna Tsing et al., M125-140. Minneapolis: University of Minnesota Press.
- Griggs, Troy et al. 2017. "More than 40 sites released hazardous pollutants because of Hurricane Harvey." *The New York Times*, 8 September. Accessed 17 November 2017. <https://www.nytimes.com/interactive/2017/09/08/us/houston-hurricane-harvey-hazardous-chemicals.html>.
- Haraway, Donna J. 2016. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham: Duke University Press.
- Hauser, Christine. 2017. "Fire ants are yet another hazard in Houston's flooded streets." *The New York Times*, 30 August. Accessed 18 September 2017. <https://www.nytimes.com/2017/08/30/us/fire-ants-harvey-hurricane-storm.html>.
- Hersher, Rebecca. 2017. "An absent EPA climate report, and a tale of two flooded superfund sites." *NPR*, 29 September. Accessed 17 November. <https://www.npr.org/sections/thetwo-way/2017/09/29/553696314/an-absent-epa-climate-report-and-a-tale-of-two-flooded-superfund-sites>.
- Holmberg, Tora. 2015. "Urban animals." In *Urban Animals: Crowding in zoocities*, 1-20. London: Routledge.
- Ingraham, Christopher. 2017. "The terrifying science behind floating fire ants colonies — and how to destroy them." *The Washington Post*, 30 August. Accessed 17 November 2017. https://www.washingtonpost.com/news/wonk/wp/2017/08/30/the-terrifying-science-behind-floating-fire-ant-colonies-and-how-to-destroy-them/?utm_term=.f8d340081459.
- Kaplan, Sheila and Jack Healy. 2017. "Houston's floodwaters are tainted, testing shows." *The New York Times*, 11 September 2017. Accessed 17 November 2017. <https://www.nytimes.com/2017/09/11/health/houston-flood-contamination.html>.
- Kennedy, Merrit. 2017. "What to do when facing a floating ball of fire ants." *NPR*, 31 August. Accessed 18 September 2017. <http://www.npr.org/sections/thetwoway/2017/08/31/547541719/what-to-do-when-facing-a-floating-ball-of-fire-ants>.
- Knutson, T.R. et al. 2010. "Tropical cyclones and climate change." *Nature Geoscience* 3: 157-163.
- Latour, Bruno. 2005. *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.
- LeBrun, E.G. et al. 2012. "Imported fire ants near the edge of their range: disturbance and moisture determine prevalence and impact of an invasive social insect." *Journal of Animal Ecology* 81: 884-895.

- Loria, Kevin. 2017. "Fire ants are banding together as floating, stinging rafts to survive Hurricane Harvey's flooding." *Business Insider*, 28 August. Accessed 18 September 2017. <http://www.businessinsider.com/hurricane-harvey-fire-ant-colonies-form-floating-rafts-2017-8>.
- Madani, Doha. 2017. "Hurricane Harvey's stinging nightmare: floating fire ant colonies." *HuffPost*, 28 August. Accessed 18 September 2017. https://www.huffpost.com/entry/floating-fire-ants-harvey-floods_us_59a48945e4b041393a1ffc91.
- Mann, Charles. 2017. "State of the Species." *Orion*. Accessed 26 October 2017. <https://orionmagazine.org/article/state-of-the-species/>.
- Meehl, G.A. et al. 2007. "10.3.6.3 Tropical cyclones (Hurricanes)." *IPCC*. Accessed 1 December 2017. https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch10s10-3-6-3.html.
- Mlot, N.J. et al. 2011. "Fire ants self-assemble into waterproof rafts to survive floods." *PNAS* 108.19: 7669-7673.
- Molina, Brett. 2017. "These are the floating fire ants in Houston floods scaring everyone on Twitter." *USA Today*, 29 August. Accessed 18 September 2017. <https://www.usatoday.com/story/tech/talkingtech/2017/08/29/these-floating-fire-ants-houston-floods-scaring-everyone-twitter/611498001/>.
- Montanari, Shaena. 2017. "Hurricane Harvey has unleashed hordes of floating fire ants." *Forbes*, 30 August. Accessed 18 September 2017. <https://www.forbes.com/sites/shaenamontanari/2017/08/30/hurricane-harvey-has-unleashed-hoards-of-floating-fire-ants/#7518790c6589>.
- Moore, Wayne S. et al. 1982. "What are magazine articles telling us about insects?" *Journalism & Mass Communication Quarterly* 59.3: 464-467.
- Oregon Department of Agriculture. 2013. "Oregon insect pest alert: Red imported fire ant." *Oregon Department of Agriculture*. Accessed 27 November 2017. <http://www.oregon.gov/ODA/shared/Documents/Publications/IPPM/RedImportedFireAntPestAlert.pdf>.
- Owens, Marcus and Jennifer Wolch. 2017. "Lively Cities: People, Animals, and Urban Ecosystems." In *The Oxford Handbook of Animal Studies*, edited by Linda Kalof, 542-570. Oxford: Oxford University Press.
- Philo, Chris and Chris Wilbert, ed. 2005. *Animal Spaces, Beastly Places: New Geographies of Human-Animal Relations*. London: Routledge.
- Rainey, James. 2017. "Floating venomous fire ants add to threats in hurricane's wake." *NBC News*, 29 August. Accessed 18 September 2017. <https://www.nbcnews.com/storyline/hurricane-harvey/floating-venomous-fire-ants-add-threats-hurricane-s-wake-n797261>.

- Rust, Stephen A. and Carter Soles. 2014. "Ecohorror special cluster: 'Living in fear, living in dread, pretty soon we'll all be dead'." *ISLE: Interdisciplinary Studies in Literature and Environment* 21.3: 509-512.
- Shilcutt, Katharine. 2017. "Yes, floating fire ant nests are a real thing." *Houstonia*, 27 August. Accessed 17 November 2017. <https://www.houstoniamag.com/articles/2017/8/27/yes-floating-fire-ant-nests-are-a-real-thing>.
- Sleigh, Charlotte. 2013. *Ant*. London: Reaktion Books.
- Taber, Stephen Welton. 2000. *Fire Ants*. College Station: Texas A&M University Press.
- Tidwell, Christy. 2018. "Ecohorror." In *Posthuman Glossary*, edited by Rosi Braidotti and Maria Hlavajova, 115-117. London: Bloomsbury.
- Tracy, James M. et al. 1995. "The natural history of exposure to the imported fire ant (*Solenopsis invicta*)." *Journal of Allergy and Clinical Immunology* 95.4: 824-828.
- Tsing, Anna et al., ed. 2017. *Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene*. Minneapolis: University of Minnesota Press.
- Washington Invasive Species Council. 2014. "Washington Invasive Species Council 2014 annual report to the legislature." *Washington Invasive Species Council*. Accessed 1 December 2017. <http://www.invasivespecies.wa.gov/documents/2014-Annual-Report.pdf>.
- Zhang, Sarah. 2017. "Yes, that's a huge floating mass of live fire ants in Texas." *The Atlantic*, 29 August. Accessed 18 September 2017. <https://www.theatlantic.com/science/archive/2017/08/fire-ants-flooding-hurricane-harvey/538365/>.