“Critical Posthumanism for All: A Call to Reject Insect Speciesism"

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Abstract:

Of all the lessons that our crisis-driven epoch of the Anthropocene is teaching us, one of the most profound is this: our very existence on earth is intimately bound with, and indeed dependent upon, the flourishing of *all* forms of life. This holds particularly true with respect to the complex multispecies encounters between human and insect communities, an area of enquiry which is almost entirely entirely neglected across the social sciences. Regrettably it is only now, faced with the imminent catastrophic decline and extinction of insect and invertebrate populations that our human relationships with these fellow Earthlings are finally being seen as deserving enough to draw the attention of critical scholars, broader activist and policy-making communities alike. In trying to address some of this considerable gap in knowledge and understanding we focus the narrative of insect decline as an impact of colonialism and anti-Indigenous white supremacist policies across the world, enabling insect speciesism to flourish alongside the exploitation of myriad other human and nonhuman creatures.

The aim of the paper is to contribute to this emerging literature by articulating a posthuman politics of hope: born of a desire to unpack both the richly embodied personal experiences, and web of relationalities formed through repeated encounters with insects, more fully. Crucially, this entails focusing on ordinary sites and places that will be familiar to most people. It is here, we argue, that to interrogate insect speciesism can teach us important lessons in how we can meaningfully extend our compassion, and broaden our intersectional approaches to social justice, to live more meaningfully and non-violently with insects as fellow Earthlings. The paper argues as long as there is discrimination towards even the smallest creatures of earth, there will also be discrimination towards humans and larger nonhuman animals.

To this end the paper pays particular attention to explores the use of everyday language and framing of insects, and how this is used to 'other' them, and thereby trivialise or demonise their existence, such as "it's *just* a bug" or they are all "pests". In doing so we show how this employs the same rhetoric and framing reinforcing broader discrimination patterns of larger nonhuman animals and humans. We evidence this by focusing on the unexpected encounter with other insects in domestic spaces, such as an office desk, and through the multispecies space of 'the allotment'. This discussion then opens up to reflect on two possible posthuman futures, one where insect speciesism is still entrenched and unrepentant; the second a decolonized society where we have aspired to live a more compassionate and non-violent existence amidst these remarkable, brilliant and incredible lives that we owe our very existence on Earth as we know it.

Keywords: insects; speciesism; allotments; colonialism; decolonialism; veganism; posthumanism; critical posthumanism; ethics; intersectionality

Introduction: Critical Posthumanism and the Stink Bug

> There are more than 200 million insects for every human being living on Planet Earth today. As you sit reading this sentence, between one and 10 quintillion insects are shuddling and crawling and flapping around on the planet, outnumbering the grains of sand on all the world's beaches. Like it or not, they have you surrounded, because Earth is the planet of the insects. (Sverdrup-Thygeson, 2019, p. xvii)

On a typical workday earlier last year at the University of Tennessee-Knoxville, I (Hannah) looked up to find a *Halyomorpha halys* (colloquially known in the United States as a "stink bug") walking across the top of my computer, pausing every so often to gauge their surroundings. I watched as they proceeded to make their way from my computer, to my desk, to the wall, and back to my desk again, before perching on my keyboard for an extended rest. While I knew I would take them outside so they could be in their natural environment, I felt no rush as they appeared content on my keyboard. Amused, I made my morning tea, and took a picture of them and posted to Facebook with the caption "My tea buddy for the morning." As a leftist ethical vegan with several like-minded folks on my friends list, I expected to receive many positive comments and "likes" on the post. However, to my surprise, within seconds I had dozens of condescending comments calling the creature "disgusting" and telling me to kill "it" before an infestation occurred, chastising me for allowing the creature to live. After I challenged their comments, imploring them to expand upon why they disliked this creature, many friends responded in a manner that suggested the *Halyomorpha halys* does not belong in the human-built environment. Having lived in the southern United States for several years, I was no stranger to how quickly these insects can establish themselves in a human home; shortly after first moving to Knoxville in 2014, on one spring morning I came into my living room to find dozens of these insects perched on the curtains! I ultimately took all of them outside for fear they wouldn't be able to find adequate food inside, and I did not see any other "stink bugs" in the house that spring. Fast forward to this day, as I am enjoying my morning tea break with the company of a beautiful and inquisitive creature, appalled at the response from my friends on social media who otherwise condemned cruelty towards others, both human and nonhuman. After I finished my tea, I gently scooped up the creature into my hand and took them outside to a tree, where they crawled onto the bark and went on with their day. *Speciesism*, I thought, *is alive and well.*

Our imaginaries here are so powerful in the way they inform our values and attitudes that are used in turn to justify our actions regarding how we engage with others. Speciesism was coined by Richard Ryder in the 1970s to draw attention to other (similar) forms of discrimination such as sexism and racism. Speciesism is the "belief in the inherent superiority of one species over others" (Moore 2013, p. 12), and perhaps one of the strongest examples of speciesism at least in a Western context is the cohabitation with companion animals including dogs and cats, who are bestowed names and generally viewed as having distinct and unique emotions. Other animals, such as pigs, cows, and sheep, are by and large characterized as objects in which their sole worth is based on what they contribute to human needs, using their bodies as/for food, clothing, labor, etc.[1] These speciesist structures often create a disconnection with the latter group of animals which ultimately enables an acceptance (whether overt or subconscious) of their violent treatment and death within

[1] Opinions of this group of animals are guided by geographical area and cultural influences, i.e., some spaces may not view pigs as a food source due to religious influences.

primarily agricultural settings, including auction houses, factory farms, slaughterhouses, and even in small family-owned farming and ranching operations.

In the same Western context, insects are often classified as "good/beautiful/natural" or "bad /pests/nuisances" based on their appearance, day-to-day activities, and how they intersect with the human built environment, and across other environments where humans have some vested interests in. The dominant classification and attitude toward insects has, regrettably, been forged by a toxic speciesist and humancentric prejudice, one which has manifested itself in a geography of violence and subjugation that, once again, defies comprehension. When commenting on the human influence over the rapid decline of insects, and insect species worldwide, the mainstream media frequently reports these as the "Insect Apocalypse" (Young, 2019). There are, of course important uneven geographical variations in how much, and how quickly, insect populations are falling. For example, "Britain has seen a measurable decline across 60 percent of its large insect groups, or taxa, followed by North America (51 percent) and Europe as a whole (44 percent)" (Hood, 2019, n.p.). Our knowledge of the crucial roles played by insects within our local and broader ecological webs is somewhat cursory, despite insects performing a number of beneficial activities within our myriad ecosystems (Weisser and Siemann, 2008). This is problematic across multiple scales, as insects exist at the foundation of the food chain, provide plant pollination services crucial for our own food production, and provide ecosystem services including nutrient cycling and waste disposal (Main, 2019). Living in a world already fraught with the myriad environmental, sociocultural, and uneven economic impacts of capitalism, colonialism, and white supremacy, a continued decline of insect populations and even eradication of these creatures would exacerbate the patterns of violence and destruction we see across our world. Moving forward, a critical posthumanism of hope which educates against insect speciesism and is framed through a lens of decolonization, anti-capitalism, and extending compassion towards all othered creatures whether human or nonhuman is crucial for envisioning a future where we can all thrive. Crafting a blueprint for this posthuman future requires us to consider our relationship to the creatures around us and how we may rebuild this relationship into one of symbiotic cohabitation, as human-nonhuman animal relations existed prior to colonization across the world.

> We must abandon the status of the human as it is presented within humanist history; we must read against this. Instead, we need to assert and assess the ways in which "human" is always a category of difference, not substance: the ways "human" always relies upon "animal" for its meaning. By refusing humanism, and, implicitly, anthropocentrism, we place ourselves next to the animals, rather than as the users of the animals, and this opens up a new way of imagining the past, something that has to be central to the project. If it is to impact upon questions about the ways in which we treat animals today, if it is to have something to add to debates about factory farming, cruel sports, fur farms, vivisection, and the numerous other abuses of animals in our cultures, then the history of animals cannot just tell us what has been, what humans thought in the past; it must intervene, make us think again about our past and, most importantly, about ourselves. The history of animals can only work at the expense of the human. (Fudge, 2002, p. 15)

Of important note in this paper is the range in which we apply the term "insect." Strictly speaking, *insect* refers to creatures within the phylum Arthropoda and the class Insecta, distinguished by a segmented body (head, thorax, and abdomen), (usually) wings, and one pair of antennae (University of Nebraska-Lincoln, 2019). When we think of the wide variety of small creatures many colloquially referred to as insects or bugs, such as earthworms, spiders, and millipedes, many of these are not actually considered insects within their scientific classification. Nevertheless, these creatures often receive similar othering and speciesist treatment as true Insecta. In this paper, we use "insect" as a catch-all category to refer to the small, othered creatures at a heightened risk for population collapse due to anthropogenic pressures. They are the creatures many of us pay to keep out of our homes. They are the creatures that are squished by our hands or feet when they enter our personal space. They are the creatures we call "pests," and may cringe at the thought of touching, or even seeing. While we understand our use of *insect* as a catch-all category for creatures within and outside of Insecta may evoke frustration from the biologists and ecologists reading this paper, we hope we may encourage you to consider the myriad historical, cultural, and economic factors leading to our complex relationship with insects and bugs, and consider at the very least a colloquial reframing of the language we use to refer to these creatures who may be small in size, but widely outnumber us humans on planet Earth.

In this paper, we call for a restructuring of speciesist relationships with insects into posthumanist futures of compassion and peaceful cohabitation, starting from where we find ourselves situated in the world, in our time and space. We embark on this paper with an acknowledgement of our positionality as two white scholars from the United States and the United Kingdom, and encourage readers to consider the significant role of colonialism and erasure of and violence towards Indigenous[2] communities in the patterns of insect speciesism we see today. As such, we include several check-in points throughout the paper where we note these intersections as playing a foundational role in our analysis. We encourage readers, prior to engaging with our paper, to explore the work of Indigenous scholars who have written at length on Indigenous symbiotic cohabitation with the environment and all of its associated creatures which was disrupted by colonialism and capitalism (see the scholarship and activism of Watts, 2013, Todd, 2014, Sheila Watt-Cloutier, and Rosemarie Kuptana). A common theme among Indigenous authors writing on colonized human-environment interactions explores how the very key customs of everyday life among Indigenous societies includes a respect and adoration for these creatures, living amongst them in a manner in which both humans and nonhumans can cohabitate sustainably. When we speak of violent, othering, and discriminatory behavior towards insects, we are problematizing the behavior of the very communities and structures which impart violence onto Indigenous life and disregard and exploit these symbiotic relationships which Indigenous people have long-cultivated with the environment. When we decry that "we" must reject insect speciesism, we speak directly to these communities of settler colonialism (which includes us both, as authors), and not towards Indigenous people who had symbiotic relationships with insects violently severed by colonialism.

[2] Throughout this paper, we use the terms "Western," "Colonial," and "Settler Colonial" communities as a contrast to "Indigenous" communities, which we understand to some readers may appear generalizing and binary. While we understand there may be more nuance beyond this binary, we wish to follow the lead of Indigenous writers in this area who use similar language to identify the relationships between those who have been colonized and those who are the colonizers.

Structurally, our paper employs the use of vignettes, in which we reflect on our own interactions with insects throughout our everyday lives in the United States and United Kingdom, alongside references to literature which serve to unpack our own experiences through a lens of insect speciesism and a posthumanism of hope. In the first section, "Complex Relationships with Insects," we problematize our cohabitation with insects as one that is exploitative based on what role the insect fulfills in our human-built environments. This introduces the second section, "Insect Speciesism & Intersectionality," which furthers this conversation through a review of literature from authors who seek to understand and characterize these complex relationships with insects in which we find ourselves engaged. The third section, "Exploring Posthuman Geographies and Multispecies Commons in Everyday Spaces," explores allotments as sites of resistance to insect speciesism, detailing the histories and sociologies of the allotment as it relates to the environment around us. The fourth and fifth sections, "The Allotment" and "Embracing a Posthuman Whole-of-Community Approach: the Vegan Organic (Veganic) Allotment" provide the first-hand experience of a co-author's own attempt to practice anti-speciesism on his own allotment in the UK, offering a guide on which to avoid reproducing speciesist actions outlined in previous sections of the paper. Finally, the sixth section "Reflections and Conclusions: Possible Posthuman Futures and Liberatory Praxis for Living More Compassionately Among Insects" explores the implications of practicing anti-speciesism and insect compassion among a posthuman future of hope, and offers several practical strategies for approaching such a future in a world where many of our current interactions with the natural environment are otherwise exploitative. We endeavour to leave the reader with a feeling of hope for a brighter future in how we engage with these beautiful nonhuman creatures around us.

Complex Relationships with Insects

> Some bodies are deemed as having the right to belong, while others are marked out as trespassers, who are, in accordance with how both spaces and bodies are imagined (politically, historically and conceptually), circumscribed as being 'out of place'. Not being the somatic norm, they are space invaders. (Puwar, 2004, p. 8)

As humans, we have a complex relationship with insects, a relationship which is largely a product of our myriad human-built environments in which we have exerted supremacy over other nonhuman beings and thrive off of their labor. Our food systems are largely driven by bee pollination, yet within the same systems we use pesticides and chemicals which threaten their very existence. We build homes in their natural habitats and create "acceptable" boundaries in which they can experience their lives. Once they cross these boundaries, such as entering our homes, our vehicles, and our general vicinity, we often deem them as nuisances, pests, and general inconveniences. Certain insect species, such as cockroaches, earwigs, ants, and "stinkbugs" receive a large proportion of this vitriol, having companies built solely on the purpose of exterminating them. These insects are often evoked when humans aim to discriminate and elicit violence against other humans, such as calling the Tutsi "cockroaches" during the Rwandan genocide of the 1990s (Aiken, 2008), and military officers calling new recruits "maggots" in an effort to belittle them (at least, in

popular culture representations of military training). Other species of insects, such as butterflies and ladybugs, are often viewed with more affinity than the aforementioned insect species, based in part on their appearance and perceived cleanliness. Finally, certain regions are marketing insect consumption as not only a more sustainable food pathway (House, 2018) but also as a luxury food, further complicating an already complex relationship between humans and insects. Wilkie (2018) notes the longevity of *entomophagy*[3] across certain parts of the world, but the relative newness of farming edible insects, a practice that is expected to increase as many geographical areas seek to find more sustainable methods to produce food supplies. However, it is important to note that in some areas that are beginning to explore insect farming, insects as food are treated as a luxury item (Scutti, 2018). As a point of clarification, we do not wish to criticize traditional Indigenous food systems which involve insect consumption; rather, we critique the manner in which insect consumption has been and will continue to be colonized and marketed as a luxury food within primarily Western spaces.

In our crisis-driven epoch of the Anthropocene with threats of an 'ecological Armageddon' with ruinous implications, we must confront our complex relationship with insect communities particularly as we face the catastrophic decline and extinction of insect and invertebrate populations. Our life on earth is highly dependent upon the flourishing of *all* forms of life, both human and nonhuman. Confronting this complex relationship will require an honest and empathic restructuring of our normalized relationships to insects, including hegemonic vocabularies which belittle these creatures. Here, we pay particular attention to insect speciesism within progressive and intersectional social justice environments, endeavoring to understand insect speciesism in groups which otherwise extend compassion and protection to marginalized trans-species populations. We hope to provide a blueprint for building a more compassionate future for our planet in which we bridge the human-insect divide and fully embrace our interdependence.

In this paper, we offer an impassioned call for a restructuring of our often-speciesist relationship with insects into one of compassion and peaceful cohabitation. If we choose so, insects can serve as our teachers and guides for how to live more slowly, intentionally, and overall a more fulfilling and richer existence. If we choose not to, and we continue to actively vilify and destroy those nonhuman creatures, we will face the end of the world as we know it, and an ever diminishing future bear witness to the extinction of (human) life itself.

Insect Speciesism & Intersectionality

As showcased in the opening anecdote, most of the criticism towards the *Halyomorpha halys* exploring Hannah's office came from a group of individuals practicing ethical, intersectional veganism and primarily ascribing to critical leftist political thought. They regularly share posts on social media condemning animal agriculture, rodeos, and circuses. At what point do creatures such as *Halyomorpha halys* no longer meet their criteria for marginalized and exploited creatures needing human allyship and protection? As an experiment, I (Hannah) made another post about three weeks later showing a picture of a snail, asking folks to comment their first thought on the post. By and large, the same group of people responded with positive sentiment including "cute," "beautiful," and

[3] The consumption of insects.

"important." What was the difference between the *Halyomorpha halys* and the snail? At first glance, it appeared the derogatory comments towards the *Halyomorpha halys* were made due to the creature not fulfilling their standards of what kinds of insect life are deemed acceptable in their human built environments, standards that the snail appeared to fulfill. Exploring how nonhuman animals intersect with the human built environment allows us to shed light on the presence of speciesism in what may be otherwise considered the most compassionately radical and inclusive social movements. Nagy and Johnson II (2013) describe a legacy of nonhuman animals who are bestowed descriptors such as pests, nuisances, destructive, and more broadly "trash animals." This legacy is, in part, shaped through the creatures' intersection with "larger human efforts to reorganize the landscape" (p. 2). The authors note many of these interactions do not necessarily come from individuals who consider themselves "animal haters," but rather from individuals broadly connected to social groups who exhibit what animal rights scholars would call speciesist behavior:

> It is not uncommon for literature written by birders, hunters, anglers, nature and environmental writers, and scientists to classify out-of-place and undesirable animals as disposable, particularly when those species compete with more desirable ones. (Nagy and Johnson II 2013, p.1)

In a speciesist society, the worth of insects (along with that of animals colloquially deemed as less desirable) is often judged by their own labor and standards for "work ethic" as viewed through a capitalist lens: Rodgers (2008) notes the history of studying honeybees not only through a lens of their value to human society, but also due to their human-like social structures. Moore and Kosut (2014) describe this connection to honeybees (and their existence in colonies) through our own desires to exist in relation to other people, seeking emotional and psychological connections with others to truly feel human (p. 518). While it is natural that humans may seek these commonalities on which to facilitate inter-species knowledge, it highlights a common theme where animals and insects must fit a certain perception in order to be deemed valuable and/or similar enough to us to warrant further study by humans[4]. Nimmo (2018) summarizes this perception as "anthropomorphic imagination":

> But this anthropomorphic imagination often focuses upon animals whose physiological and cognitive characteristics are more easily amenable to an anthropomorphic model of conscious being, subjectivity, and selfhood, meaning vertebrates, mammals, primates, and cetaceans. (n.p.)

Puckett (2013) notes fears of some creatures, such as snakes, originating from the perceived threats they may impost on our safety. While it is natural to exhibit fear towards something that could poison us and even kill us, we often imprint these fears onto non-venomous species who visually

[4] This is, of course, not to diminish the scientific research which endeavours to understand animal and insect behaviors that are *not* comparable to human sociality. Rather, here we comment on broader speciesist tendencies to judge animals and insects by their relation to and worth to human society, rather than as creatures having inherent value through their existence, much as we see in Indigenous relationships with nature.

resemble the poisonous species, either avoiding these creatures or, worse, killing them. Turning the conversation towards insects, many species of insects have long been associated with threats to human hygiene, safety, and productivity. Robertson (2013) explores the cultural history of the Mormon cricket (hereafter *Anabrus simplex)*, a creature inheriting a legacy of destruction at least as far back as biblical times in the story of the locust swarms in Egypt. Today, the *Anabrus simplex* is widely seen as a threat to crops and gardens, with local media using military vernacular to characterize their descent onto the American West. Even a cursory browse through academic literature on industrial agriculture yields dozens of research articles on the impact of insect "pests" on farmland crops (see Sharma, 2014, Oliveira *et al*., 2014, and Deutsch *et al*., 2018, for example). Much of the literature explores the impact of insects on crops particularly through the lens of climate change, which further alters human cohabitation with insects in settler colonial and industrial capitalism societies across the world.

Of course, we empathize with the farmers whose livelihoods are impacted by the *Anabrus simplex* and other insect species, but also wish to draw attention to the peaceful coexistence of Indigenous people with these creatures prior to violent colonization and industrial capitalism (Robertson 2013, p. 97). Si and Turpin (2015) also note the symbiotic cohabitation between insects and Indigenous Australian societies, who give insects roles in traditional ceremonies and myths, and also sustainably consume insects as food and medicine[5]. As settler colonialism irrevocably altered these peaceful ecosystems and trans-species cohabitation, the nature in which insects were viewed among an industrial human-built environment began to shift. In many, if not most, present-day landscapes of industrial capitalism and settler colonialism, insects who benefit the human-built environment are protected and celebrated. Those who are perceived as threats to this environment, such as the *Anabrus simplex*, are reviled. However, it is primarily through these processes of colonization and the disruption of trans-species cohabitation that such a distinction developed.

Insect speciesism fueled by the level in which an insect benefits the human-built environment around us manifests within several contexts, from the everyday interaction with insects (such as in the opening narrative with the *Halyomorpha halys*), to interactions between humans in which discriminating language involving insect metaphors, analogies, and similes are used to either belittle another person or describe negative treatment received from another person. For example, in Held (2017), marginalized and exploited individuals share ethnographies on their interactions in spaces of racism in which they compare the looks received by white people as though "you [are] like an insect that wants to be squashed…" (Held 2017, p. 546). This is not a condemnation of their words or lived experiences within the myriad racist spaces in our daily geographies[6], but rather a commentary on how insect speciesism enters our vocabulary and allows for a space to these individuals to characterize how they feel during these racist encounters. In a critical posthuman future, embracing strategies to combat insect speciesism should be concurrent with implementing

[5] As ethical vegans living in systems of exploitative industrial capitalism, we ourselves do not consume insects, but we also do not criticize insect consumption within Indigenous food systems.

[6] As two white authors from the United States and the United Kingdom, we recognize the unearned privileges we receive, on a daily basis and systemically, based on our whiteness. With awareness of that understanding, we highlight this quote to not criticize marginalized and exploited individuals for using this insect simile, but, as stated above, to showcase the presence of derogatory insect metaphors that are deeply embedded in our colloquial vocabulary.

strategies to combat white supremacy, capitalism, and colonialism, as the many spaces in which we see insect speciesism manifest are also influenced by the violent impacts of the latter three.

Exploring Posthuman Geographies and Multispecies Commons in Everyday Spaces

In 2019, a scientific review paper by Sánchez-Bayo and Wyckhuys highlighted the perilous decline of insect species across the world and attracted widespread media attention. Their findings make for sobering reading, revealing - among other dystopian trends - that the "dramatic rates of decline that may lead to the extinction of 40% of the world's insect species over the next few decades." (2019, p. 8). The UK Guardian's main report on this included an interview with Sánchez-Bayo, in which he restated the severity of the situation: "When you consider 80% of biomass of insects has disappeared in 25-30 years, it is a big concern." (Carrington, 2019, n.p.). Elsewhere, they quoted Prof Dave Goulson (University of Sussex), who reiterated the fact that this:

> (S)hould be of huge concern to all of us, for insects are at the heart of every food web, they pollinate the large majority of plant species, keep the soil healthy, recycle nutrients, control pests, and much more. Love them or loathe them, we humans cannot survive without insects. (ibid)

In full knowledge of the collapse of insect populations globally, and the catastrophic implications that this holds for our future, it might seem rather an odd choice to "extend the project of emancipations beyond the human" (Cudworth and Hobden, 2018, p. 90) by focusing on the multispecies geographies that are found within the fluid boundaries of backdoor gardens and allotments. Surely, in the grand scheme of things, these spaces are relatively parochial, marginal and just plain unimportant? We would argue though that such a pejorative reading is wholly misplaced. Rather, the posthuman worlds entangled and embedded in seemingly 'ordinary' and everyday socio-spatial geographies, are *precisely* the places where a re-imagining of the possibilities for envisaging and enacting a liberatory politics of inter-species justice can emerge from. The hope and expectation is that rooting an ethics of care and compassion in these familiar and known spaces which will, in turn, meaningfully unfold and inform other spaces which are found 'out there'. In this way a posthuman emphasis on allotments and gardens takes inspiration from Byrne et.al's (1998) call to recognise 'the household' as an important 'alternative' site of (post-capitalist) work and organisation. In the context of this paper we can amend their key passage accordingly:

> We can view the household [allotment] as hopelessly local, atomized, a set of disarticulated and isolated units, entwined and ensnared in capitalism's [anthroparchy/speciesism's] global order, incapable of serving as a site of class [intersectional multispecies politics] and radical social transformations. Or we can avoid conflating the micro with the merely local and recognize that the household [garden/ allotment] is everywhere, and while it is related in various ways to capitalist [anthroparchy/ speciesist] exploitation, it is not simply consumed or negated by it. (Byrne et.al (1998, 16), Quoted in White, 2016: 284))

For those unfamiliar with the concept of allotments, in the UK an allotment is considered to be

> "An area of land, leased either from a private or local authority landlord, for the use of growing fruit and vegetables. In some cases this land will also be used for the growing of ornamental plants, and the keeping of hens, rabbits and bees." (NAS, n.d.)

Allotments have long been seen as important "alternative" sites in the rich and long history of contestation between people and the right to access and 'use' land. Back in the mid-17th century, for example an example of this would be 'Diggers Movement' and their demand for "'right to dig' for all" (Perry, 2017). In England The Enclosures Act defined a fundamental shift from public access to privatisation of land:

> Between 1700 and 1850, parliamentary enclosure extinguished the openfield system of agriculture in perhaps half the villages and towns of England.1 Fully private property in land, characterized by the owners' exclusive use rights, replaced an older system of shared use rights. (Shaw-Taylor, 2001, p. 640)

Burchardt suggests that the first real phase of the allotment movement in the UK occurred "between 1793-1830". Over the last two hundred years then allotments and the allotment movement have become associated with meaningful expressions of survival and resistance to capitalist norms (e.g. governing the production, exchange and consumption of food). It is unsurprising therefore to note that allotments have certainly been praised highly as an example of anarchy in action, with David Crouch and Colin Ward's book "The Allotment: Its Landscape and Culture (1999) probably the most well-known. For Crouch and Ward (1999, p. vii):

> In the nineties we can add [to popular images of allotments] hope, struggle, hard work and friendship, family gathering in. And let us add love and care, both of these for growing – for growing something with the family, for looking after the ground, in solitude or with others. Allotments stimulate metaphors about the ways we live now: about storing produce; about looking after the earth; about friendships; about fighting to keep the biggest vandals – rogue local councils – off the land; about creativity, self-reliance and mutual help; about growing for future, by direct intervention in the land yourself.

The allotment, in addition to all these, is a rich and dynamic site of posthuman communities. Kettles (2014) presents an ethnography of allotment users in Dublin, Ireland who represent a typology of gardeners from those motivated by their own desire to grow food (called "practical gardeners"), to those who tend to an allotment plot for environmental and ecological sustainability (called "idealist/eco-warriors"). The dynamic posthuman relations present in allotment communities is, sociologically, a topic worthy of exploration in a greater conversation around insect speciesism and critical posthumanism[7]

The Allotment

[7] For example, to deepen existing knowledge and broaden our understanding on this area I (author) plan to conduct interviews to gain a far richer and deeper qualitative analysis of the inter-species relationships that are present among fellow allotment users.

As part of an ongoing commitment to seek ways to act that embody the radical nonviolent spirit of an anarchist vegan praxis,[8] I (Richard[9]) leased a local allotment plot in my hometown in the UK in March 2019. My initial motivation to do so was the wonderful potential that this offered in terms of growing 'my own' vegetables and fruit directly. While falling short of being 'self-sufficient', for me this represented a key ethical and environmental form of direct action insofar as it meant relying less on buying our food from elsewhere, particularly local supermarkets. Securing an allotment also reflected a desire of wanting to grow and eat 'truly' organic vegan produce. To elaborate, in addition to the violence and exploitation of workers that all too often underpins the production and harvesting of 'vegan' fruit and vegetables in Europe and the UK, the manner in which these foods are produced is also intensely problematic. For example, in addition to the question of pesticide use, even 'organic' foods are almost entirely grown in soils which are fertilized by the direct by-products of nonhuman animal exploitation and suffering. Popular sources of animal-based fertilizers include animal excreta, usually from farmed animals, as well as the use of 'Fish, Blood and Bone'. A Blood meal is, quite literally, "the powdered blood of slaughtered animals…. Other animal-based organic fertilizers include crab meal, dried whey, earthworm castings, feather meal, and leather meal. (Whitman and Dejohn. n.d.) Needless to say, any way of sowing seeds, planting out and growing fruit and vegetables that avoid such geographies of violence was a fundamental concern. Thankfully, there were a few pioneers already out there to learn from:

> Call it vegan, ethical, clean, stock-free farming, super organic, organic+ or veganic gardening, this is a method of horticulture taken on for moral and health reasons. Gardening this way will ensure a minimal amount of exploitation or harm to animals and the environment. Basically, this is making the positive choice to do 'no shit' (actually animal manure – or blood, dish and bone, or exploitation) gardening. (Appleby, 2018 p. 11)

When I took lease over the plot of land that was my allotment, this was until that moment seen as being 'unoccupied'. Yet the presence of any human figure will always be just one body set amongst a tremendous multitude of others. Everywhere you looked flowers, plants (including a few sturdy leeks and raspberry canes) could be seen; sparrows and starlings watched from the safety of tree branches; a range of (flying) insects and other creatures of all shapes and description - bees, wasps, beatles, ladybirds, aphids – could be seen continuing going about their lives [one could justifiably say work here], untroubled by, and utterly uninterested in, my presence.

Unfortunately, given the hours spent reading up on 'how to successfully manage' allotments, or watching programmes dedicated to growing your own food, you quickly become acutely aware of how a viciously speciesist narrative surrounds these multi-species flora and fauna, and their desired - or more often undesired - existence. The dark truth that Malamund (2013) articulated is very much alive and well on the allotment:

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[8] We intend to embark on a topic of future study in which we unpack anarchist vegan organic praxis and compare and contrast this to vegan organic praxis, seeking a more critical discussion of the role of anarchist praxis in vegan organic gardening, including perceptions from class struggle and syndicalist anarchists on this form of anarchist praxis.

[9] The entire section of "The Allotment" is written from Richard's perspective, and all uses of "I" refer to his own words.

> There is a range of nonhuman animals who are despised or feared or mocked because we have constructed them as the disgusting "other" in our anthropocentric fantasies of existence.
>
> We like to imagine that we are in control of our homes, gardens, forests, parks, landscapes, and urban spaces, and we are determined to serve as gatekeepers, or wardens, adjudicating which species are allowed and which are banned, which are prized and which are denigrated. These decisions are often based on our prejudices, our tastes, and our habits (p. ix).

Anybody in possession of even a rudimentary knowledge about gardening is aware of the extreme discrimination of more-than-human others. Some are considered 'desirable', principally by virtue of offering some 'positive' instrumental value to the gardener. "Desirable" plants would likely range from those that crop or fruit in some way, have medicinal value, and/ or those which have a more aesthetic appeal; to be admired *in situ* or used as 'cut-flowers' for indoor display. Undesirable others would include all those that fall outside of these humanocentric values: a mass of diversity and difference lumped in the catch-all colloquium "weeds". Indeed the very definition of "weed" speaks to this undesirable and unwanted status ie., "a plant that is not valued where it is growing." (Merriam-Webster, n.p.) and will be removed.

Insects, unsurprisingly, are defined and differentiated according to a similarly crude reductive framing. As Robertson (2013) observed:

> Virtue and vice, beauty and beastliness - such binaries shape the historical representation of animals. If a creature doesn't serve humankind, it falls prey to demonization… In an anthropocentric, hierarchical universe, and animal that competes for human [sic] resources offends our sense of entitlement (p. 89).

Insects considered 'desirable' would, again, fall into this group by the perceived value they bring the gardener. Mostly this value would be indirect, insofar as their presence would be beneficial for the plants. Almost exclusively 'above ground' this designation would be reserved for bees, perhaps ladybirds (as a predator of 'undesirable' insects and attractive-to-the-eye). Below-the-ground the presence of worms are encouraged, though this is rarely enough to save them from the metallic blade of the spade, fork, trowel, mechanical rotavator or any other manner of instrument designed to be pounded into the earth to till, and indiscriminately slice through any unfortunate creature that happens to be in its way. For this - and other - reasons I am an enthusiastic advocate and practitioner of a 'no dig' approach (see Dowding and Hafferty, 2017) to gardening. Though still very much an alternative, this approach is gaining greater influence and momentum year on year. Appelby (2018, p.23) neatly summarises its many benefits:

> Digging the soil will kill many of its creatures and break up the natural drainage they have created. Arable farmers have caught onto no dig (instead of ploughing), which they call minimal tillage, finding it improves soil structure, moisture retention, germination and yields, and cuts costs, weeds and fuel use.

"Desirable" insect species however are far outnumbered by those considered "undesirable". Indeed the designation "undesirable" is a euphemism: suggesting, perhaps, a degree of tolerance and tolerability. In reality these incredibly vulnerable creatures are almost universally loathed; their existence within the allotment site or garden something to be snuffed out at every opportunity. These are 'pests' insofar as they either; (1) pose a threat to the 'quality' and success of plants grown for food or pleasure and/ or; (2) are perceived as annoying or as threatening (e.g. wasp). There is a further dynamic at play here, one which defines 'pest' according to the potential impact on capitalist economic profits. As Rai and Ingle (2012) note:

> Insects inflict injury to plants and stored products either directly or indirectly in their attempts to secure food. Insects that cause less than 5 % damage are not considered as pests. The insects which cause damage between 5 and 10 % are called minor pests and those that cause damage above 10 % are considered as major pests (Dhaliwal et al. 2010). Pimentel (2009) reviewed that worldwide insect pests caused an estimated 14 % loss, plant pathogens cause a 13 % loss and weeds a 13 % loss. The value of this crop loss was estimated to be US $2,000 billion per year (p. 288).

It is striking to note the intersectional violence in operation here across the human-insect divide. The Collins Dictionary (n.p) gives illustrative examples of 'pest' being as follows:

"You can describe someone, especially a child, as a pest if they keep bothering you."

"A person or thing [sic] that annoys, esp by imposing itself when it is not wanted; nuisance"

"A person or thing [sic] that causes trouble, annoyance, discomfort, etc.; nuisance; specific., any destructive or troublesome insect, small animal, weed, etc."

For all creatures despised and vilified as "pests" things tend to go very, very badly for them. Indeed, as far as 'pest' insects are concerned, then the violence that they will face is limited only by human imagination. It is a violence which is furious, merciless and relentless in its intent: ending only with their extermination and/ or permanent elimination from these spaces where their presence is not wanted: places where they have dared to "infest". Wadiwall (2015, p. 3-4) treated human "systems of violence towards animals precisely as constituting a war… as warlike... a sacrificial war that is as old as Genesis.'" This war is very much embedded and animated in these everyday spaces of allotments and domestic gardens the world over, and we would do well to both acknowledge this, and seek ways to live more peaceably as a matter of urgency.

Embracing a Posthuman Whole-of-Community Approach: the Vegan Organic (Veganic) Allotment

Jennifer Marshman (2019, p. 1), talks about working within and toward a "whole-of community-approach" to being to address the crisis in the Anthropocene, and begin to mend our fractured human-nature relationships:

> This "whole-of-community" approach is one that is concerned with both inter-human and interspecies relationships to move us towards communities that are place-based, integrated, participatory, and grounded in eco-social justice and equity….
>
> Reconciling humans with the rest of the biotic community through place-based initiatives is possible by fundamentally and radically expanding our current framing of the concept of community.

From the first day on the allotment onward, I (Richard[10]) have tried to act in ways that are consistent not only with a non-violent approach toward all life, but in actively seeking to explore ways to maximise the conditions that will allow a flourishing of life. Of course I am conscious of the obscenely asymmetric power relationships here, and the reality that have invaded and occupied 'their' space. The allotment is (now) a rich tapestry of multiple spaces. There are 'wild' spaces which lay untouched (by human hand), populated by whatever has self-seeded there, including gooseberry bushes and brambles. The predominantly vegetable growing spaces are contained within raised beds, with preventative non-harmful measures in place to try and protect the plants from being eaten (by slugs, caterpillars, birds etc.), particularly through the use of bird-friendly mesh or similar netting. In the case of insects, where these barriers are transgressed, and they are regularly (!) I carefully pick up the transgressor (sic) and place them in what I hope to be their nirvana: the compost heap. The open compost heap is a fertile interspecies place of meeting, one where snails, slugs, centipedes, woodlice, ants and worms of all varieties, shapes and forms may be found. Crucially, it is a sanctuary in many ways: here they are safe from harm, be it from birds or the crushing boot-stamp (usually) of other people. Here, for most all allotmenteers, these creatures in these spaces suddenly become "desirable". A recognition of the alchemic work they undertake on breaking and digesting everyday garden and household 'waste', and transforming it into that richest and most desirable of organic matters, compost.

These possibilities provide tangible insights into what a more sustainable, inclusive inter-species futures across UK allotments and gardens may look like. Crucially the desire - or necessity - to 'grow your own' is becoming an increasing reality for more families. The National Gardening Association (2014), for example reported that

> · The number of households participating in food gardening from 2008 to 2013 grew from 36 million households to 42 million households. That's an overall increase in participation of 17% in 5 years and a compound annual growth rate of 3% a year. The largest increase occurred from 2008 to 2009 when participation in food gardening increased by 4 million households, or 11% in one year (p. 2).

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[10] The entire section "Embracing a Posthuman Whole-of-Community Approach: the Vegan Organic (Veganic) Allotment" is written from Richard's perspective, and all uses of "I" refer to his own words.

The final thought here is saved for the anarchist geographer Elisee Reclus. Reclus talked about a human objection to cruelty and violence being rooted in 'the ugliness of the dead':

> It is the ugliness of the deed which fills us with disgust when we see a naturalist pinning live butterflies into his box, or destroying an anthill in order to count the ants… Ugliness in persons, in deeds, in life, in surrounding Nature- this is our worst foe. Let us become beautiful ourselves, and let our life be beautiful! (Reclus, 1901, p. 6)

When we unshackle ourselves from the extreme prejudices of deeply speciesist society; when are encouraged to see and value with the most 'othered' of other animals as co-travellers in this world; when we understand the positive impact they have on our lives and the world as we know it; when we enact different non-violent relationships with them, then, in the final reckoning, we also stand to benefit tremendously from this as they will surely do.

Reflections and Conclusions: Possible Posthuman Futures and Liberatory Praxis for Living More Compassionately Among Insects

> Insects have been around for a long time, infinitely longer than us humans… (Sverdrup-Thygeson, 2019, p. xxxii)"

> We need to appreciate the dignity of… all animals [and other species], who are equally possessed of integrity and importance and spirit - in order to preserve our own dignity and to exist as good citizens of the planet. (Malamud, 2013, p. xiii)

Several months after the unkind reactions to my peaceful tea break with the *Halyomorpha halys* in my office, I (Hannah) was pondering this very manuscript as I entered the elevator at work on the ground floor. As the doors closed, I noticed I was sharing the ride with a large mosquito, who was exploring the area at large but inching increasingly closer to my arms as we approached the 4th floor. My mind immediately categorizing the creature as a "pest," my first thought was one of disgust and dread, as I loathe the swelling and itchiness (also, the risk of disease transmission) that accompanies a mosquito bite. Upon reflection, this experience encouraged us as authors to again consider the complexity of insect speciesism. Our reactions to the insects around us are guided and filtered by several sociocultural and geographical factors, and education and activism around insect speciesism should accordingly be intersectional in nature. My reaction to this mosquito was speciesist in nature, as I had only a few hours earlier hugged my dogs, whom I deemed to be acceptable inhabitants of my personal space. However, by living in a geographical area without the risk of contracting diseases such as malaria from mosquito bites, I did not feel a need to immediately flee or kill the creature out of fear for my health and safety. However, a person who lives in a high-risk area for malaria-transmission and/or has an auto-immune response or a severe allergic reaction to mosquitoes may experience greater levels of fear and immediately kill the creature or flee.

In her influential work on posthumanism, N. Katherine Hayles (1999) suggests the process by which we become posthuman "both evokes terror and excites pleasure" (p. 283). With an

understanding of our complex relationships with insects, we introduce two scenarios for posthuman futures which mirror Hayles' line of thought. One scenario evokes a continuation of capitalist "pleasures" of development, destruction, othering, and consumption, which will all but certainly lead to an ecological Armageddon. The other scenario details the pleasures of an ecological flourishing and peaceful cohabitation with insects, requiring an immediate disruption of insect speciesism and capitalism accompanied by decolonization praxis, which may in and of themselves evoke terror in those unwilling to radically alter how we interact with the world around us and envision a sustainable posthuman future. The current path is increasingly locked into one of ecological Armageddon, while the alternative is one of an interspecies commons and ecological flourishing. Invoking a posthuman politics of hope we conclude by thinking through some ways of living more compassionately and justly with, and among, insects.

On more than one occasion, we (Hannah and Richard) have shared stories with each other of taking extra time during walks after a rainstorm to relocate displaced earthworms on the pavement, often amidst the confused looks of passersby. In fact, I (Hannah) vividly recall taking a walk several years ago after a rainstorm, returning dozens of worms who were beginning to dry up on the hot pavement to the safety of the soil. My former partner chastised and ridiculed me, telling me, "it's just nature's course" and to let the worms be. *However*, I thought, *is it really natural*? As humans in settler colonial landscapes of the United States and United Kingdom[11], we have built homes, roadways, pavement, and other intrusive structures upon areas of habitation for insects, drastically altering the environment around us into one that primarily serves a human function and forces the rest of the creatures around us to adapt. Given this, we advocate for an empathic approach towards living with and supporting the insects around us. The following eight strategies for liberatory praxis provide a means for living more compassionately and symbiotically with the insects around us, and move us closer toward emancipatory posthuman futures of hopes and possibilities (see Cudworth and Hobden, 2018):

1. Try to recognize, minimize, and ultimately banish usage of metaphors, analogies, and phrases which are derogatory towards insects, humans, and nonhuman animals. While the focus of this paper is insect speciesism, compassion towards insects is better facilitated in a society also practicing compassion and inclusion of other marginalized groups. Such a practice involves actively eliminating usage of words and phrases that are ableist, racist, sexist, xenophobic, and speciesist in nature.
2. Raise consciousness about insects with others. Challenge pejorative comments about their right to exist etc.educate (e.g. important roles and functions insects provide)
3. Take direct action (in the name of Insect Liberation!)! Rescue flies/ moths/ butterflies/ wasps/ bees etc. that are helplessly searching for a way out (e.g. banging their bodies on a

[11] We encourage readers to note our distinction here between Indigenous housing and infrastructure, and infrastructure associated with settler colonial societies (such as the UK) and colonized areas (such as the US). While traditional Indigenous housing and infrastructure operate through a symbiotic relationship with the environment, the latter tend to be markedly intrusive to the natural world.

window pane), and let them fly freely. Intervene if you see others trying to harm an insect whether 'in panic' (e.g. kill a spider, wasps etc.) or through irritation (e.g. trying to swat a fly)

4. Come up with a series of strategies and tactics to remove insects where there is a genuine conflict (e.g. within the home). Start off with the 'least-harm' option… Think about helping provide the basic needs for insects e.g. food & drink (providing bees and other flying insects access to safe water; housing and food).
5. Embrace a veganic organic praxis as far as is possible as part of a broader intersectional commitment to live as non-violently and compassionately as possible.
6. Appreciate the company of insects, and value your (all too fleeting) time together. Watch, observe and marvel at their wonder.
7. Actively support scholars and activists of color who are engaging with decolonization praxis and education, as decolonization praxis often explicitly details a mutually-beneficial relationship between humans and insects, as well as other nonhuman animals. Read their work, cite them, and donate to them when able.
8. Engage in an ongoing education about anarchism and community care, particularly as these areas often highlight and describe how to extend compassion to *all* of those in our communities, including insects.

As with the rest of the paper, we encourage readers to explore how these liberatory strategies intersect with Indigenous symbiotic relationships with the environment. In building a critical posthuman future of interspecies commons and ecological flourishing, these strategies not only combat insect speciesism but also help support a future in which *all* forms of life can flourish.

References

Aiken, N.T. (2008), "Post-conflict peacebuilding and the politics of identity: Insights for restoration and reconciliation in transitional justice", *Peace Research*, Vol. 40 No. 2, pp. 9-38.

Appleby, M. (2018), *The Super Organic Gardener: Everything You Need to Know About a Vegan Garden*, Pen & Sword White Owl, Barnsley, UK.

Burchardt, J. (2002), *The Allotment Movement in England, 1793-1873,* The Royal Historical Society, Boydell Press, Suffolk, UK.

Collins Dictionary (n.d), "*Pest*", available at: https://www.collinsdictionary.com/dictionary/english/pest (accessed 20 August 2019).

Crouch, D. and Ward, C. (1999), *The Allotment: Its Landscape and Culture.* Five Leaves Publications, Nottingham, UK.

Cudworth, E. and Hobden, S., (2017). The Emancipatory Project of Posthumanism. Routledge: London.

Deutsch, C. A., Tewksbury, J. J., Tigchelaar, M., Battisti, D. S., Merrill, S. C., Huey, R. B., and Naylor, R. L. (2018), "Increase in crop losses to insect pests in a warming climate", *Science*, Vol. 361 No. 6405, pp. 916-919.

Dowding, C. and Hafferty, S. (2017) No Dig Organic Home & Garden Permanent Publications, Hampshire, UK.

Fudge, E. (2002), "A left-handed blow: writing the history of animals", in Rothfels, N. (Ed.), *Representing Animals*, University of Indiana Press, Bloomington, IN, pp. 3-18.

Hayles, N.K. (1999), *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*, University of Chicago Press, Chicago, IL.

Held, N. (2017), "'They look at you like an insect that wants to be squashed': An ethnographic account of the racialized sexual spaces of Manchester's Gay Village", *Sexualities*, Vol. 20 No. 5-6, pp. 535-557.

Hood, M. (2019), "World seeing 'catastrophic collapse' of insects: study", available at: https://phys.org/news/2019-02-world-catastrophic-collapse-insects.html (accessed 20 August 2019).

House, J. (2018), "Insects as food in the Netherlands: production networks and the geographies of edibility", *Geoforum*, Vol. 94, pp. 82-93.

Kettle, P. (2014), "Motivations for investing in allotment gardening in Dublin: A sociological analysis." *Irish Journal of Sociology,* Vol. 22, No. 2, pp. 30–63.

Malamund, R. (2013), "Foreword", in Nagy, K. and Johnson II, P.D. (Eds), *Trash Animals: How we Live with Nature's Filthy, Feral, Invasive, and Unwanted Species,* University of Minnesota Press, Minneapolis, MN, pp. ix-xiv.

Mashman, J. (2019), "Communing with bees: a whole-of-community approach to address crisis in the Anthropocene", *Journal of Agriculture, Food Systems, and Community Development*, advance online publication.

Merriam-Webster Dictionary (n.p), "Weed", available at: https://www.merriam-webster.com/dictionary/weed (accessed 20 August 2019).

Moore, J. M. (2013), "Speciesism", *Contexts*, Vol. 12 No. 1, pp. 12-13.

Moore, L. J. and Kosut, M. (2014), "Among the colony: Ethnographic fieldwork, urban bees and intra-species mindfulness," *Ethnography,* Vol. 15, No. 4, pp. 516–539.

Murphy, W. and Sapir, R. (1988), *Lords of the Earth: A Destroyer Novel*. Penguin Books, Hawthorn, Australia.

Nagy K. and Johnson P. (2013), "Introduction", in Nagy, K. and Johnson II, P.D. (Eds), *Trash Animals: How We Live with Nature's Filthy, Feral, Invasive, and Unwanted Species*, University of Minnesota Press, Minneapolis, MN, pp. 1-28.

National Allotment Society. (n.d.), "Allotment info", available at: https://www.nsalg.org.uk/allotment-info/ (accessed 20 August 2019).

National Gardening Association (2014), "Special Issue: Garden to table: A 5-year look at food gardening in America", available at: https://garden.org/special/pdf/2014-NGA-Garden-to-Table.pdf (accessed 23 September 2019).

National Geographic (2019), "Why insect populations are plummeting and why it matters", available at: https://www.nationalgeographic.com/animals/2019/02/why-insect-populations-are-plummeting-and-why-it-matters/ (accessed 28 September 2019).

Nimmo, R. (2018), "Enfolding the BioSocial Collective: Ontological Politics in the Evolution of Social Insects", *Humanimalia, a Journal of Human/Animal Interface Studies*, Vol. 9, No. 2., n.p.

Oliveira, C.M., Auad, A.M., Mendes, S.M., and Frizzas, M.R. (2014), "Crop losses and the economic impact of insect pests on Brazilian agriculture", *Crop Protection*, Vol. 56, pp. 50-54.

Perry, J. (2017), "The history of allotments", available at: learningwithexperts.com/gardening/blog/the-history-of-allotments (accessed 28 August 2019).

Puckett, C. (2013), "Beauty and the Beast", in Nagy K. & Johnson P. (Eds.), *Trash Animals: How We Live with Nature's Filthy, Feral, Invasive, and Unwanted Species*, University of Minnesota Press, Minneapolis, MN, pp. 67-85.

Puwar, N. (2004), *Space Invaders: Race, Gender and Bodies out of Place*. Berg Publishers, Oxford and New York.

Reclus, E. (1901 [2007]). *On Vegetarianism/The Great Kinship of Humans and Fauna*. Jura: Petersham.

Robertson, C. (2013), "Managing apocalypse: a cultural history of the Mormon Cricket", in Nagy K. & Johnson P. (Eds.), *Trash Animals: How We Live with Nature's Filthy, Feral, Invasive, and Unwanted Species*, University of Minnesota Press, Minneapolis, MN, pp. 86-104.

Rodgers, D.M. (2008). *Debugging the Link Between Social Theory and Social Insects*. Louisiana State University Press, Baton Rouge.

Sánchez-Bayo, F. and Wyckhuys, K.A., (2019), "Worldwide decline of the entomofauna: A review of its drivers". *Biological Conservation*, Vol. 232, pp. 8-27.

Scutti, S. (2018), "Yum! Insect food as a luxury brand might lure Westerners", available at: https://www.cnn.com/2018/10/02/health/insect-food-study/index.html (accessed 17 April 2020).

Sharma, H. (2014), "Climate change effects on insects: implications for crop protection and food security", *Journal of Crop Improvement*, Vol. 28 No. 2, pp. 229-259.

Shaw-Taylor, L. (2001), "Parliamentary enclosure and the emergence of an English agricultural proletariat", *The Journal of Economic History*, Vol. 61 No. 3, pp. 640-662.

Si, A., & Turpin, M. (2015), "The importance of insects in Australian Aboriginal society: a dictionary survey", *Ethnobiology Letters*, Vol. 6 No. 1, pp. 175-182.

Springer, S., White, R.J., and Lopes de Souza, M. (Eds) (2016), *The Practice of Freedom: Anarchism, Geography, and the Spirit of Revolt (Transforming Capitalism)*, Rowman & Littlefield International, London, UK.

Sverdrup-Thygeson, A. (2019), *Extraordinary Insects. Weird, Wonderful. Indispensable. The ones who run our world,* Mudlark, London, UK.

Taylor, M. (2019), "'It's a groundswell': the farmers fighting to save the Earth's soil", available at: https://www.theguardian.com/world/2019/apr/24/farmers-save-earths-soil-conservation-agriculture (accessed 28 August 2019).

Todd, Z. (2016), "An Indigenous feminist's take on the ontological turn: 'ontology' is just another word for colonialism", *Journal of Historical Sociology*, Vol. 29 No. 1, pp. 4-22.

University of Nebraska-Lincoln. (2019), "Basic Insect Morphology", available at: https://entomology.unl.edu/scilit/basic-insect-morphology (accessed 26 September 2019).

Young, E. (2019), "Is the insect apocalypse really upon us?", available at: https://www.theatlantic.com/science/archive/2019/02/insect-apocalypse-really-upon-us/583018/ (accessed 28 August 2019).

Watts, V. (2013), "Indigenous place-thought and agency amongst humans and non-humans (First Woman and Sky Woman go on a European Tour!)", *DIES: Decolonization, Indigeneity, Education and Society*, Vol. 2 No. 1, pp. 20–34

Weisser, W. W. & Siemann, E. (Eds.) (2008), *Insects and Ecosystem Function*, Springer, Berlin and Heidelberg.

White, R.J. (2017), "Rising to the challenge of capitalism and the commodification of animals: post-capitalism, anarchist economies and vegan praxis", in Nibert, D. (Ed.), *Animal Oppression and Capitalism*, Praeger, Connecticut.

Whitman, A. and DeJohn, S. (n.d.), "Animal-based fertilizers for organic gardens", available at: https://www.dummies.com/home-garden/gardening/animal-based-fertilizers-for-organic-gardens/ (accessed 28 August 2019).

Wilkie, R.M. (2018), "'Minilivestock' farming: Who is farming edible insects in Europe and North America?, *Journal of Sociology*, Vol. 54 No. 4, pp. 520–537.