

## **Growing home together**

An eco-phenomenological study of urban wild-gardeners' experience of insects

*Florina Cianga-Christophersen*

---

Master Thesis Series in Environmental Studies and Sustainability Science,  
No 2022:030

A thesis submitted in partial fulfillment of the requirements of Lund University  
International Master's Programme in Environmental Studies and Sustainability Science  
(30hp/credits)



# **LUCSUS**

Lund University Centre for  
Sustainability Studies



**LUND**  
UNIVERSITY

---

## **Growing home together**

An eco-phenomenological study  
of urban wild-gardeners' experience of insects

Florina Cianga-Christophersen

A thesis submitted in partial fulfilment of the requirements of Lund University International Master's  
Programme in Environmental Studies and Sustainability Science

Submitted May 10, 2022

Supervisor: Ebba Brink, LUCSUS, Lund University

**Empty page**

## **Abstract:**

Assumptions about humankind's separation from the rest of life on Earth have fuelled worldwide environmental destruction and a subsequent widespread loss of abundance and biodiversity amongst insects. As insects are vital to the health of the biosphere, a reconciliation of humans with the natural world is in due season. Drawing on eco-phenomenological ideas of the Flesh, embodied perception, and body language, I investigate how ten urban wild-gardeners' experiences of and with insects influence their ecological awareness, sense of agency, and motivation to support biodiversity within their gardens. Analysis reveals that (a) ecological awareness steers aesthetic preference towards wilder nature, (b) interspecies relations are deeply embodied and contribute to a human's understanding of environmental complexities, and (c) despite reservations about personal agency, the gardeners' more-than-human experiences can inspire individual and community-level sustainable change. I conclude by discussing the potential of embodied more-than-human experiences within and outside sustainability science.

**Keywords:** *eco-phenomenology, wild-gardening, more-than-human, multispecies sustainability, the Flesh, embodied experience*

**Word count:** 11.603

## Acknowledgements

To all of my teachers. Human or invertebrate.

A special thank you to

Calibri, Ebba, Emma K., Anna, Emma S., my mother, my father, Alfred, and the ten gardeners.

Den der kender fuglens flugt kan male

Den der kender fuglens flugt kan læse

Den der kender fuglens flugt kan skrive

Den der kender fuglens flugt

forstår at fuglens flugt kan fanges i et digt

Den der kender fuglens flugt forstår at digtet lyder:

Den der fanger fuglen fanger ikke fuglens flugt

(Vagn Steen, 1964)

# Table of Contents

<b>1 Introduction .....</b>	<b>1</b>
1.2 Research questions .....	2
1.3 Research philosophy and contribution to sustainability science .....	2
1.4 Being of the same does not mean we are the same .....	3
<b>2 Background: The private garden .....</b>	<b>4</b>
2.1 Garden studies.....	4
2.2 The private garden in Denmark.....	5
<b>3 Theory: Experiencing with the more-than-human.....</b>	<b>7</b>
3.1 Phenomenology: the study of lived experience .....	8
3.2 Biological entanglement and the experience of being enflashed .....	9
<b>4 Methodology.....</b>	<b>11</b>
4.1 The eco-phenomenological method.....	11
4.2 Data collection and analysis.....	12
<b>5 Analysis: An urban wild-gardener's experience of insects .....</b>	<b>14</b>
5.1 Wild gardening in practice: Doing, undoing, non-doing .....	14
5.2 The guilty anthropos: Control and insurgency .....	16
5.2.1 <i>"It is first and foremost my garden."</i> .....	16
5.2.2 <i>The experience of allowing and being allowed a place in the garden.....</i>	16
5.2.3 <i>When the garden is your teacher.....</i>	17

<b>5.3 Perceiving the Other: Closeness and neutrality .....</b>	<b>18</b>
<b><i>5.3.1 Aesthetic appreciation.....</i></b>	<b>19</b>
<b><i>5.3.2 Temporal perception .....</i></b>	<b>20</b>
<b><i>5.3.3 The value of a neutral relationship .....</i></b>	<b>20</b>
<b>5.4 Beyond the garden: The passing on of knowledge and experience .....</b>	<b>22</b>
<b>6 Discussion .....</b>	<b>23</b>
<b>6.1 The Flesh of the urban wild garden .....</b>	<b>24</b>
<b>6.2 Implications for sustainability science .....</b>	<b>24</b>
<b>6.3 Implications outside the sciences.....</b>	<b>26</b>
<b>6.4 Limitations and future work.....</b>	<b>28</b>
<b>7 Conclusion.....</b>	<b>30</b>
<b>8 References .....</b>	<b>31</b>
<b>9 Appendix.....</b>	<b>40</b>
<b>9.1 Conversation guide .....</b>	<b>40</b>

# 1 Introduction

We, humans, have always existed in relation to the natural environment and relied on it for our survival. This fact has been apparent and acknowledged for most of our species' life on Earth (Soga & Gaston, 2016). However, following centuries of industrial and technological advancements supposed to save us from the ravenous nature, humans' relationship with the natural environment has been greatly reduced to one of destruction and exploitation. Irony has it that this fundamental change in our relation to nature has materialised as a cornucopia of environmental stressors hurling us towards an unclear but likely unsafe future for humankind (IPCC, 2022). One of these stressors is seen as a significant decline in the loss of abundance and biodiversity of the sizeable group of life-forms we generally refer to as insects (Eggleton, 2020; IPBES, 2019; Lerman et al., 2012). As insects are vital to the health of the biosphere and thereby to the health of humans, the prospect of a potential insect apocalypse is undeniably a crisis requiring prompt action.

Aside from motivating the invention of various solutions to protect and enhance insect livelihoods, this crisis also brings to the surface the underlying and deep-rooted issues in the way we humans relate to more-than-human nature. For decades, a group of dedicated environmental scientists have directed critique towards the long-standing perceived separation of humans, particularly modern, urban humans, from the rest of the living biosphere (Abram, 1996/2017; Brown & Toadvine, 2003; Kessler, 2019; Keto & Foster, 2021; Washington, 2019). They maintain that this separation is the cause of human-induced environmental degradation. The roots of this separation grow deep but have been diagnosed as the symptom of people becoming less and less likely to have direct experiences with nature, a so-called *extinction of experiences* (Buijs et al., 2018; Soga & Gaston, 2016). As a rising proportion of the world's human population resides in urban areas and interactions with the living world are reduced to strolls with pet-dogs in managed parks, humans and wild species are becoming increasingly disconnected (Derby Lewis et al., 2019). However, this development also makes it more and more significant to study human-nature interactions in urban contexts to scrutinize the possibilities for more-than-human relationships in thoroughly modified environments and further for creating more sustainable urban futures.

In this thesis, I explore the relationship between humans and insects as experienced by ten Danish urban garden owners who actively pursue a wilder gardening practice. Applying an eco-phenomenological approach, I aim to understand why these people invite wild(er)ness into their lives and how the presence of other species, particularly insects, shapes the gardeners' relation to the living



world. The private garden is a unique human-nature nexus, but while studies on private gardens are abundant, they seldom question underlying anthropocentric assumptions that shape humans' relations with other species. Through eco-phenomenological ideas such as the Flesh, embodied perception, and body language, supported by Springer's (2021) concept of anthropoprivilege, I advance our understanding of human-nature connections. Thereby I participate in an ongoing debate on how to dismantle anthropocentrism and build a more sustainable world for humans and more-than-human species alike.

## **1.2 Research questions**

The overarching research question in this thesis is:

*How do other species, particularly insects, occur in the lived experience of urban wild-gardeners?*

To explore how my research may inform sustainable development, I propose the following sub-questions:

*SQ1: How does the experience of other species affect a human's motivation to grow their garden wild?*

*SQ2: On this basis, how can an eco-phenomenological approach contribute to sustainable change?*

## **1.3 Research philosophy and contribution to sustainability science**

In this section of the introduction, I establish my position as a researcher and situate my study in sustainability science.

I base my research on a relational more-than-human ontology. As coined by Abram (1996/2017), the 'more-than-human world' is a way of describing human embeddedness in a world of relationality. Therefore, the most relevant ontological responsibility in the context of my thesis is to define the boundaries of our social world. In my research, I assume that we, as humans, are always-already integrated into an ecological community (Gilbert, 2014). I acknowledge that my own embodied individual is the product of the cooperation of hundreds of thousands of individuals who participate in creating my sociality, humans and other species included. Thereby, individualism and anthropocentrism can only be seen as constructed and narrowed down extractions that hinder our relationship with other beings (Keto & Foster, 2021). I am a human being that cannot escape my human perspective. Still, through an eco-phenomenological approach, I aim to reach a disposition from which

I can scrutinise the perceived disconnect between humans and other beings. It is with these considerations in mind that I proceed with my research.

The bridging of disciplinary boundaries is common practice in sustainability science as no knowledge domain can stand alone in the struggle for a more sustainable world (Wiek et al., 2011). Although primarily applied in environmental philosophy, eco-phenomenology has unexplored potential for sustainability science both as a theory and a method. The separation of modern human's from nature still influences sustainability science today, despite noteworthy attempts at reconciliation (Davelaar, 2021; Minter, 2017; Rupprecht et al., 2020). Consequently, more-than-human beings are often disregarded as individuals in their own right. By studying human-nature relations through an eco-phenomenological lens, I go back to the essence of existence, the experience, from which I hope to make visible and ultimately challenge the anthropocentric way of seeing the world. Such an eco-phenomenological exploration may reveal flaws in the common ontological claims that we are separate from nature and the dominant epistemological assertion that the world is only knowable through the human mind. In sustainability science, different and often more eco-centric human-nature relations found in various indigenous communities are frequently viewed as the product of different ontological positionings. Kessler (2019) argues that this is a faulty description: it is not a matter of incompatible ontologies but instead of an inaccuracy in the modern life ontology - a lack of knowledge in the modern human's perception of nature. This hypothesis supports my reasoning for exploring the possibility for modern, urban humans to move closer to and form closer relations with other species than what we typically assume is possible. My study echoes Kessler's (2019) belief that a shift in the ontology and ethics that steer our way of seeing human-nature relationships is the necessary leverage point for unearthing solutions to our contemporary struggles "rooted in something more than an anthropocentric desire for survival" (p. 7). On this journey, I believe eco-phenomenology has a role to play.

#### **1.4 Being of the same does not mean we are the same**

I wish to briefly tackle a recurring yet often misplaced criticism directed towards more-than-human studies that research in this field is tainted by anthropomorphisation (Bannon, 2011; Lien & Pálsson, 2021). I argue that it is precisely when we assume that we can speak on behalf of another being that we succumb to anthropomorphising nonhumans, which only, at best, reveals something about our own empathy for nature. By tuning in on the embodied experience of the more-than-human and focusing on the expression of a body language, I aim to give back agency and avoid portraying the human experience of other species as synonymous with anthropomorphisation.

## 2 Background: The private garden

In this chapter, I explore some of the core insights from garden studies contributing to understanding the relationship between a gardener and the other species in a garden (2.1). Further, I delineate the state of the private garden in Denmark and recent years' turn towards rewilding (2.2).

### 2.1 Garden studies

The 'private garden' is a place of rich history and tradition with many preconceptions and functions tied to it (O'Neill & Roberts, 2019). It is a place of rest, reflection, and contemplation. It is a place for sensuous experiences and memories. It is a home of a plurality of different lifeforms. In urban areas, where contact with the natural world is often scarce, private gardens also constitute an important place for human interaction with more-than-human species as gardens welcome nature into everyday life.

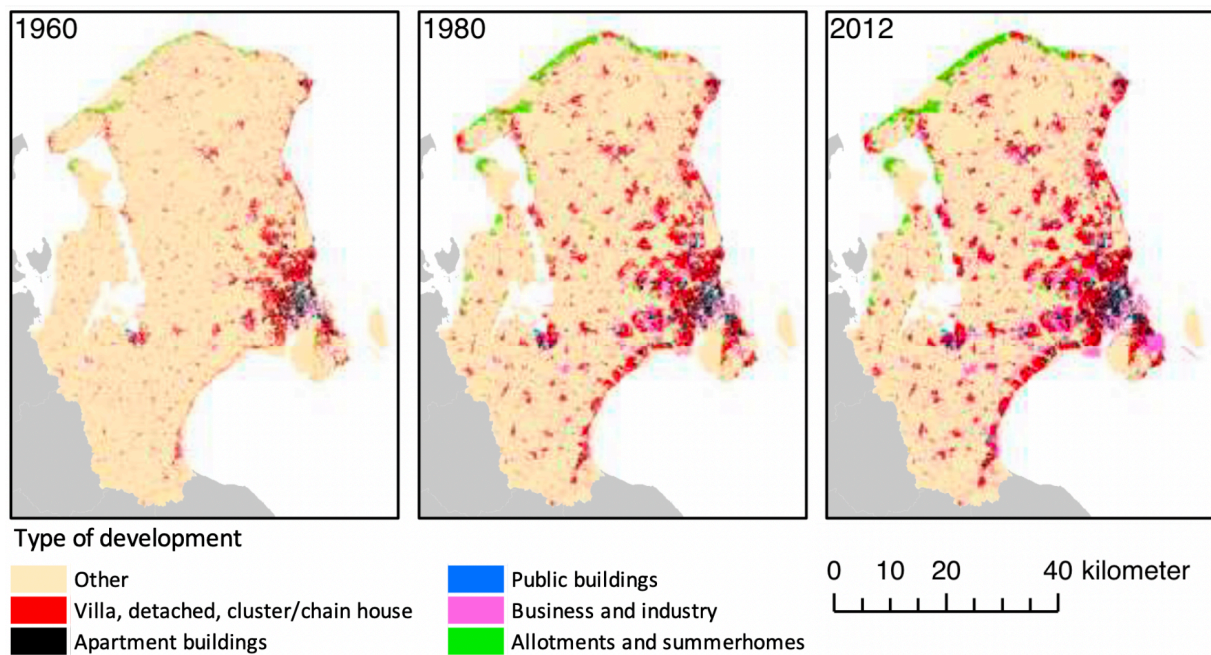
Gardens have commonly been studied as sites of human activity, "creating, modifying and maintaining" nature according to cultural ideals (Power, 2005). Such studies address multiple aspects of gardening, for example values and motivations, gardening as landscape management, and social distinctions and interactions between humans (Bell-Williams et al., 2021; Bhatti et al., 2009; Diduck et al., 2020; Freeman et al., 2012; Jones et al., 2021). Though discrete indications of recognising the more-than-human surface in these studies, they are all motivated by the benefits other species and biodiversity provide human individuals and society (e.g., gardens' ecosystem services, well-being, and recreational qualities). Concerning the experience of the private garden compared to other natural environments, research is conflicted. A share of studies argues that people's appreciation of a garden depends on a sense of order and control, and they state that it is an inherent quality of the private garden that it encourages care for nature through management (Freeman et al., 2012; Head & Muir, 2006; Petersen, 2013). Similarly, some studies find that garden owners believe their requirements for neatness conflict with sustainability goals, which is said to likely stem from a lack of knowledge and understanding (Beck, 2002; Clayton, 2007; Norton et al., 2021). Other studies distance themselves from this simple view of the garden. Coming from different theoretical approaches, such as *actor-network theory* and Tim Ingold's concept of the *dwelling perspective*, researchers discuss a more fluid image of the garden as a hybrid space co-created by the interactions of humans and other species (Hitchings, 2003; Ingold, 2021; Power, 2005). In these studies, the relationships within a garden's ecosystem, even the relationship between the species living in the garden and the gardener, are rarely harmonic or static but instead in constant flux. Gardening is not simply an exercise of power over a docile environment; instead, it is an intricate practice involving a sort of duality (Petersen, 2021). On

the one side of this duality, gardeners perceive their gardens as a canvas or a stage where they can realise their aesthetic vision. On the other side, gardeners reflect on themselves as stewards or caretakers who tend to the life forms, mainly plants, and react to their needs. However, in the context of these studies, relationships with the more-than-human are still understood in narrow terms, and the agency and subjectivity of other species are rarely discussed.

Nonetheless, these contributions to garden studies have in recent years been adopted by more-than-human geographers to explore gardens as a space where human life and the more-than-human are thoroughly mixed and interdependent. Examples are found in Ginn's (2014) study on gardeners and slugs' 'sticky interrelation' and Pitt's (2015, 2018) work on developing a garden methodology that recognises more-than-human agency. Evidently, the field of garden studies is coloured by a tendency to objectify the more-than-human. Still, these recent pulls towards a more inclusive perspective of nature suggest a new path for future explorations. One where the environment, plants, and animals are seen as active participants rather than pliable biological material. It is from this branch of knowledge that my thesis extends.

## **2.2 The private garden in Denmark**

Denmark is a relatively small country with 5.8 million people, where 88.2% of the population are registered in urban areas (Worldometer, n.d.). Since the middle of the 1900s, urban areas in Denmark have expanded significantly (Petersen et al., 2014). Particularly the areas around the bigger cities of Copenhagen and Aarhus have seen an increasing redistribution of space previously used for agriculture and nature to public buildings, businesses, infrastructure, and housing (see Figure 1 for an illustration of the urban expansion of Copenhagen since 1960).



**Figure 1.** Copenhagen’s urban expansion since 1960. Figure adapted from Fig. 7 in Petersen et al. (2014).

Denmark's most common form of housing is a single-family house, understood as either a detached house, a villa, or a cluster/chain house (Petersen et al., 2014). Commonly, a plot of land with a garden belongs to these single-family houses. With the acceleration of the urban growth boom since the 1960s, more and more people have become garden owners. Today, it is estimated that more than half of the Danish population has access to one of the 1.2 million private gardens and 230.000 summer houses and allotments in the country (Haveselskabet, 2020). Evidently, private gardens comprise a significant proportion of land use. While a private garden is indeed private, it is also a part of a greater landscape. This is undoubtedly the case in suburban areas, where detached house neighbourhoods occupy considerable space, as exemplified in Figure 1, and where private gardens often make up most of the areas’ green infrastructure. It suggests that private gardens can play an essential role in conserving diverse and healthy nature, once again emphasising the need for a comprehensive understanding of the ecological circumstances of a private garden.

Although Danish gardening culture is rich, little research has been done on private garden practices in Denmark and even less on Danish gardeners’ relationships with the more-than-human. In a study on private gardening in the greater Copenhagen area, Petersen (2021) finds that a general concern for biodiversity is not integrated into Danish garden practices. However, he also states that most of the participants in his study have a latent engagement in caring for nature, implying a potential for greater inclusion of biodiversity considerations in gardening. Another study describes Danish gardeners’ perception of the garden as a synthesis of nature and home (Petersen et al., 2014). They enjoy the presence of other beings, yet their enjoyment depends on being able to domesticate and control

nature. From this study, it can be understood that Danish private gardens are a part of the home while still being a type of nature. It is less controlled and less controllable than the interior parts of a home, yet it is more controlled and home-like than a public park.

A movement to rewild the private garden has gathered pace throughout Denmark in recent years. Organisations such as WWF, Haveselskabet, and Vild med Vilje have initiated successful campaigns to encourage public units, businesses, and civil society to invite wild nature into their outdoor spaces (*Danmarks Vilde Haver*, n.d.; Vild med Vilje, n.d.). This blooming engagement with rewilding private property can be fitted into a much larger movement, where policymakers and other societal actors nationwide are committing to responding to the concerning state of the Danish nature and the ongoing decline in healthy habitats and biodiversity (#DKVILD, n.d.; Ejrnæs et al., 2021). The considerable attention drawn to the rewilding of private gardens is still a very recent development, and at present little evaluation has been done on its concrete impact. However, it is evident from the popularity of the campaigns that many private garden owners in Denmark wish to contribute to protecting Danish nature.

### **3 Theory: Experiencing with the more-than-human**

Commencing with a paragraph on the anthropocentric narrative in academic research, I briefly introduce phenomenology (3.1), followed by an account of the eco-phenomenological ideas that underpin this thesis (3.2).

Modern humans' perceived separation from the natural world can be traced back to the creation myth, if not further, and has continued with the industrial revolution, widespread urbanisation, and the consequential decline in human-nature experiences (Hatfield, 2018; Kessler, 2019; Kopnina et al., 2018; Soga & Gaston, 2016). Still today, the common discourse portrays humans as something different from the rest of the living world - superior, exceptional. Even in academia, where the relationship between humans and nature has long been of interest, most research still follows a dualist mindset or explores other species as something that cannot substantially reciprocate human relational approaches (Bell-Williams et al., 2021; Kessler, 2019; Mumaw & Bekessy, 2017; Rupprecht et al., 2020). In the scientific debate about the implications of this discourse, Springer (2021) recently contributed with his concept of *anthroprivilege* to describe the social norms that reinforce anthropocentrism and confer humans with a profound sense of entitlement to exploit, control, and exert ownership over other species. For example, he argues that the sheer dominance of the human voice endorses our privilege, no matter how aware we are of our own situatedness. In line thereof, when we talk about

nature, it is often spoken about as one whole rather than as a conceptual space that consists of various individuals (Kessler, 2019; Rupprecht et al., 2020). In writing my thesis, I have also found myself challenged by this linguistic lock-in, which effectively turns more-than-humans into inanimate and relationally unreachable objects. However, there are islands within the sciences that attempt to go beyond this common perspective on nature and present us with another way of seeing(/speaking). One of them is found in the field of phenomenology.

### **3.1 Phenomenology: the study of lived experience**

Phenomenology, the study of lived experience, was established as a philosophical movement by the German philosopher Edmund Husserl at the beginning of the 20<sup>th</sup> century to respond to and critique the ruling conceptions of scientific knowledge as value-neutral and objective (Bunnin & Yu, 2004; Howarth, 1995; Wood, 2001). Phenomenology understands the human as embedded in a world of meaning. Therefore, even if science aims to describe the world instead of constructing it, a researcher can never put herself, and her values, at a distance from the world in said description (Thøgersen, 2004). Instead, phenomenology goes back to the *things themselves*, exploring reality as it is comprehended through experience (Brown & Toadvine, 2003; Starks & Brown Trinidad, 2007). Furthermore, phenomenology rejects the idea that phenomena (i.e., the things) are entirely mental and simply internal impressions of a world outside the mind (Howarth, 1995). In other words, phenomenology has to do with our *being-in-the-world*, our always-already connectedness to the world before this distinction of outer and inner takes place. Phenomenology does not deny an external, objective reality, but that reality is simply unavailable. Instead, phenomenology directs the scientific focus to the validity of the concrete human experience. To enforce the validity of experience in research, Husserl developed the concept of the *life-world* to describe the shared world of lived experiences in which all subjects partake (Häggström, 2019; Husserl, 1931/2002). The life-world is, in other words, the intersubjective convergence of the physical world and the experience of being in that world. By integrating experience into scientific knowledge and through phenomenological analysis of the life-world, we can arrive at something as close to truth as possible. But instead of truth being a static fact, it is associated with a quality of relationality, a definition of truth that bears similarity to what Bastien and Kremer (2004) define as *experiential knowing* or the process of “embodying or being the knowledge.” (p. 75). Therefore, rather than knowledge of the world being something we passively accumulate, it is something we embody through our experiential engagement with the world.

### 3.2 Biological entanglement and the experience of being enfleshed

As a subfield of phenomenology, eco-phenomenology gained momentum at the end of the 20<sup>th</sup> century along with the increasing certainty of the extent of anthropogenic destruction of the natural environment (Brown & Toadvine, 2003). As the name implies, eco-phenomenology unites phenomenology with ecological thought. The discipline of ecology studies the interactions that take place within an ecological community (Karban et al., 2014). While competition has often been foregrounded as the primary form of interaction in ecological relationships, recent decades of research have emphasised cooperation and that all organisms in an ecosystem depend on and mutually influence one another (Bronstein, 2015). As Smith (2013) puts it, “[e]cology is a reminder of a multi-species and multi-existent ‘we’ that modern humanism chose to forget, or rather struggled to exempt and/or except the human species from in countless ways.” (p. 30). Today, ecology has branched out into many fields of study, including phenomenology. While traditional phenomenology is a critique of the ontology of the naturalistic sciences, ecology included, eco-phenomenologists argue that there is a potential in combining phenomenology with ecology to make sense of the world in the face of complex socio-ecological challenges (Keto & Foster, 2021). Ultimately, eco-phenomenology argues that humans need to establish solidarity with the environment and rebuild the awareness we once had of our entanglement with other species (Abram, 1996/2017). To that, the phenomenological method can inform ecology, a science that by itself cannot study the direct sensuous reality since we must understand how we live in the world before truly understanding how we are a part of it.

Both in the academic sphere and civil society, attempts to challenge the anthropocentric narrative of human mastery over nature have commonly incentivised a sense of responsibility to interpret and manage the wishes of other species as they are perceived as unable to speak for themselves (Conservation International, n.d.; Muhar & Böck, 2018). This approach is dismissed by eco-phenomenologists, who argue that other life forms do have a language (Abram, 1996/2017; Langer, 2003). However, it is not a human language but instead a language of the body. This notion is heavily inspired by the works of phenomenologist Maurice Merleau-Ponty, who emphasised embodiment as a fundamental aspect of a subject’s experience<sup>1</sup> (Thøgersen, 2004). To Merleau-Ponty, the body and the embodied experience is the primary source of any knowing. Furthermore, he introduced phenomenology to the idea of mutual sensory experiences or perceptual reciprocity. With this is

---

<sup>1</sup> Despite his scholarship being prevalingly anthropocentric, in his latest writing Merleau-Ponty sought to extend his concept of embodied experience as also available to nonhuman subjects. It is this latter interpretation of the subject that has been attractive to eco-phenomenologists (Langer, 2003).



meant that the subject and the phenomenon experience and influence one another (e.g., listening, seeing, or touching the life of the garden is also to feel oneself heard, seen, or touched by the life of the garden) (Wood, 2001). This idea is not unheard of in the sustainability field. For instance, we find similarities between the centring of the body in eco-phenomenology and Cooke et al.'s (2016) call for an embodied resilience theory. In their paper, they argue that simply focusing on the mental reconnection of humans and the natural environment limits the integration between the social and the ecological. Instead, relations emerge from the ongoing interactivity between body, mind, and environment, which is why the body must be incorporated into the theoretical basis of studying human-nature relationships.

To fully grasp the implications of embodiment for eco-phenomenological thought, we must turn to Merleau-Ponty's notion of 'the Flesh'. Eco-phenomenologists interpret the Flesh as a way of describing the biosphere, of which human society is a part, as wholly interconnected and -dependent (Abram, 1996/2017). This concept is considered one of Merleau-Ponty's most significant contributions to environmental philosophy because it is precisely in the Flesh that the entanglement of the subject and the phenomenon transpires (Bannon, 2011; Merleau-Ponty, 1968). Conceptualised as flesh, the biosphere is a space that is neither subjective nor fully objective but instead constituted by the plurality of lived experiences motivating the lives of countless individual beings. The most significant aspect of the Flesh is that all these individual beings are situated in actual material bodies that are seen as different appearances of the same stuff or Flesh (Abram, 1996/2017). Essentially, the Flesh both holds a direct critique of human estrangement from the natural world and functions as a tool for environmental researchers to articulate our inescapable immersion in the biosphere (Hailwood, 2014). Here, it is briefly worth noting that eco-phenomenology does not ignore the capability or importance of human rationality. However, by applying concepts such as the Flesh, eco-phenomenologists insist that the human mind does not exist in a vacuum. There is no gap between the sensuous body and the world, which, for eco-phenomenologists, presents the possibility of communication and relationships between the human and the more-than-human. Recollecting Anna Tsing's (2015) words, while we cannot escape our humanness, the more-than-human – the insects in the garden – are not mere objects of our experiences. They are also fellow subjects *with* whom we experience. One example of how eco-phenomenology illuminates our enfleshed condition is Häggström's (2019) research on people's lived experience of a forest. By exploring human-forest experiences through a phenomenological lens, she reveals that humans' intersubjective relationships with forests go beyond an instrumental valuation of the natural world. Instead, she finds that the forest "is intertwined with the participants in various ways and is, indeed, a communicative milieu that emboldens the participants to act in certain ways" (Häggström, 2019, p. 1343). Knowing that we are always-already a

part of the Flesh is what opens us up to relationships with other species and a feeling of being with nature. The Flesh helps us remain human while becoming aware of the flawed perception of humans as separate. It can help us reach a new horizon of understanding, where other species participate in and cooperate with humans to create the life-world. Therefore, eco-phenomenology provides a robust theoretical framework for exploring humans and more-than-human relationships through wild-gardeners' experiences of and with insects.

## **4 Methodology**

In this chapter, I outline my eco-phenomenological approach (4.1) and the specific data collection and analysis procedures applied in the thesis (4.2).

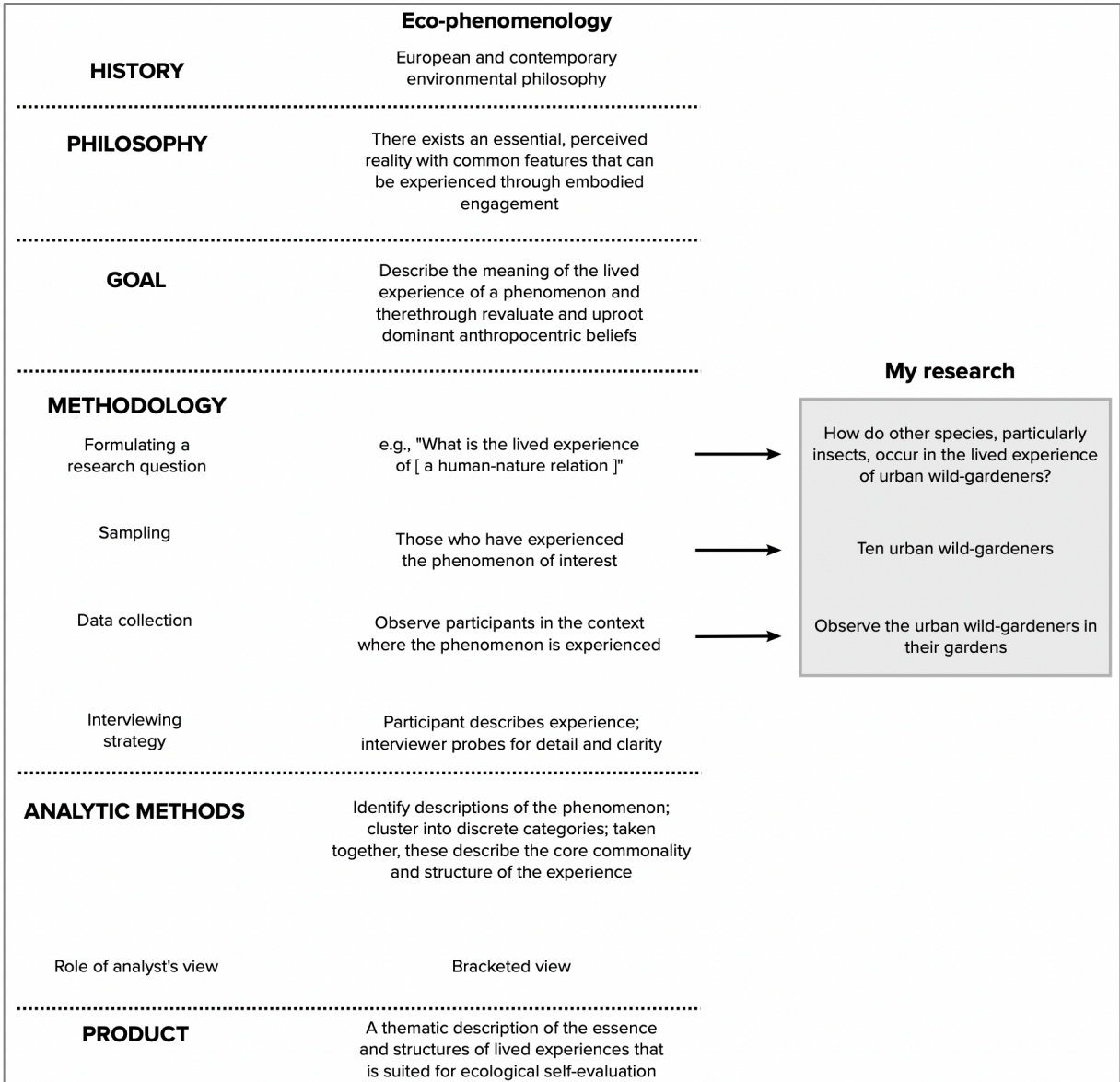
### **4.1 The eco-phenomenological method**

This section outlines the most fundamental aspects of the eco-phenomenological method. In Figure 2, I have visualised the eco-phenomenological approach, including its history, goal, philosophy, methodology, analytical method, and product. This visualisation is intended to give the reader an overview of the basis and process of my research.

Though there exists many different phenomenological approaches that focus on a great variety of phenomena, as a research method, phenomenology tends to use thick description and analysis of the lived, embodied experience through which the phenomenon in question is understood (Starks & Brown Trinidad, 2007). In this process, the researcher's own perception and assumptions are acknowledged and then set aside. This is known as *epoché*, suspension of judgment, or simply the bracketed view. In the context of my study, the bracketed view has meant exploring my relationships with more-than-human beings while considering common as well as my own assumptions about concepts such as nature, gardens, and insects. Another critical feature of eco-phenomenology is that its truths do not begin in facts or theory but in the experience of relations. This entails constantly comparing the experienced phenomenon with the theoretical conceptualisations to ensure the synergy of the two. Therefore, reflexivity is at the core of the eco-phenomenological approach (Chan et al., 2015). Therefore, it has been my ambition to analyse the urban gardeners' lived experience of the more-than-human withheld from my assumptions and the presented theory while constantly reflecting on their correspondence.

Phenomenology as a method is not simply a display of someone's description of a phenomenon. Instead, it entails interpreting and trying to understand the meaning behind a lived experience. It is

about drawing out information from discussions about and observations of the phenomenon in question and exploring the data from the perspective of an individual. In the case of eco-phenomenology, this comes with a distinct awareness of both the individual’s situatedness in a world of relations and the (often socially constructed) circumstances that inhibit or encourage those relations. In other words, eco-phenomenology as a method can be described as a bottom-up approach that starts with the direct embodied and sensory experience of a concrete aspect of the life-world.



**Figure 2.** The eco-phenomenological approach regarding history, goal, philosophy, methodology, analytic method, and product. A box to the right specifies the figure in the context of my research. Figure adapted from Fig. 1 in Starks and Brown Trinidad (2007).

**4.2 Data collection and analysis**

The empirical data consists of face-to-face semi-structured conversations with ten Danish urban garden owners who describe at least part of their garden or gardening practice as wild. The gardeners

were found by posting on five different Facebook groups that provide online communities for Danish garden owners interested in wild gardening. I decided to engage with gardeners who already implement biodiversity-supportive features in their gardens. Therefore, the gardeners are not necessarily representative of the common Danish garden owner. Instead, the study exemplifies the urban private garden's potential for facilitating more-than-human relationships between modern, urban citizens and insects. I limited the geographical locations to the greater Aarhus and greater Copenhagen areas, the two largest cities in Denmark, to ensure the highest possible impact of urbanity on the gardeners' perception of nature.

The studied gardens include two allotment gardens and eight gardens belonging to single-family houses. The smallest garden was about 120 sqm, and the largest was 2200 sqm. The oldest ownership extended over the past 30 years, and the newest was only seven months old. Three participants identified as men, seven as women. The youngest participant was 29, and the oldest was 66. Five of the gardeners had children under 18 living at home. Though all participants could be considered middle-class, they represent a broad socio-demographic group in terms of occupation, such as a university student, a high school teacher, an attorney, a civil engineer, a retired headmaster, and an employee at an unemployment insurance fund. All ten gardeners gave verbal consent to the inclusion of our conversation in this thesis and approved of the use of their first names.

The conversations took place in the respondents' gardens between the 3<sup>rd</sup> and 14<sup>th</sup> of March 2022, and they lasted between 40 minutes and two hours. In the gardens, the garden owners initiated the conversations as they showed me around the space, allowing for different thoughts and stories of experiences to emerge naturally and, most importantly, for the more-than-human to interrupt and participate in the conversations. While the conversations were generally unstructured, I explained to the gardeners the purpose of my study and my particular focus on their experiences with insects. I also created a conversation guide (see Appendix 1) based on the research questions and my initial literature screening, which steered the questions I asked and which I referred to at the end of each conversation to guarantee a similar set of topics were discussed by all ten gardeners.

I audio recorded most of the conversations, which I partly transcribed. I recorded any further noteworthy conversation in writing. The parts included in the thesis were translated by me from Danish to English. In addition, I wrote down notes on the garden environment and any noticeable interactions between the gardeners and the life in the gardens. I also made sketches and took photographs of the gardens to keep a memory of their visual appearance. Photography is not an objective tool for documentation since the photographer decides what to take pictures of, so I made sure only to

photograph that which the gardeners spent time talking about or interacted with in other ways, for example through touch.

The empirical data were analysed through an intuitive, thematic coding of the description of the phenomenon that occurred during the conversations. I read and listened through the conversations repeatedly with the intent to further identify patterns in the gardeners' ways of relating to the life in their gardens. To stay close to the empirical data, I structured my analysis according to four key dimensions that emerged from the material: (1) Doing, undoing, non-doing, (2) control and insurgency, (3) closeness and neutrality, and (4) the passing on of knowledge and experience.

## 5 Analysis: An urban wild-gardener's experience of insects

In this chapter, I present and analyse the empirical data to reveal the phenomenon that is a wild-gardener's experience of insects. Starting at the practical level, I review the concrete actions the gardeners take to improve the health of their gardens' ecosystems (5.1). After that, I explore how the garden as a nexus of control and insurgency expands ecological knowledge and awareness (5.2). Afterwards, I consider the gardeners' perception of more-than-human life in terms of closeness and neutrality (5.3), followed by the final section in which I give an account of how experiences in and with a wild garden extend beyond the garden to inspire sustainable change (5.4).

### 5.1 Wild gardening in practice: Doing, undoing, non-doing

A gardener can employ many simple measures to benefit a garden's ecosystem and biodiversity. In Table 1, I have visualised the various measures implemented by the wild-gardeners in this study.

**Table 1.** The number of wild-gardeners (n = 10) reporting engagement with different wild-gardening behaviours.

Wild-gardening behaviour	Yes
<b>Doing:</b>	
Introduced water feature	6
Planted native, pollinator-friendly species	10
Installed habitat fence	10
Installed soil mound	2
Installed bee hotel	2
<b>Undoing:</b>	
Removed lawn or sod	8
Removed non-native plant species	9
<b>Non-doing:</b>	
Began mowing less	9
Kept garden waste within garden	10
Left wild plants to grow	10
Did citizen science observation of insects	6



The first category, *doing*, describes features that the gardeners add to their gardens to aid biodiversity. The second category, *undoing*, refers to the actions the gardeners take to remove ecologically harmful elements from their gardens. The two first categories show that even though a wild garden may be interpreted as a space with less management, it still requires a gardener's active engagement. All the gardeners reported planting native, pollinator-friendly plant species, installing habitat fences, keeping garden waste within the garden, and leaving wild plants to grow in support of local insects. Evidently, insects are one of the foremost factors that define the composition of their gardens as exemplified in Figure 3 which shows pictures of the insect homes Lene has established in her garden.



**Figure 3.** In her garden, Lene has constructed many different types of insect homes. The picture to the left shows a log pile. In the oldest logs at the bottom of the pile, she often saw many different insect species. The picture to the right shows her newest project, a north-south facing soil mound for ground-nesting insects. March 13<sup>th</sup>, 2022.

The final category in Table 1, *non-doing*, represents the gardeners' intentional lack of action. When I asked the gardeners about their interpretation of wild nature, they unanimously described it as somewhere free of human interference. Though they did not imagine their gardens as entirely wild, and none of them wished to refrain from gardening completely, they all attempted to let go of the scope of their interference. Lene said she now prefers to take a step back and take note of how nature cultivates her garden. Hans Jørn told me he spends most of the time in his garden "vegetating", watching the bees. By actively deciding not to do anything and by practising intentional awareness of other species' lives, the gardeners found themselves increasingly appreciative of the wild garden. This is a reinforcing aspect of the experience of the wild garden, as by returning agency over the garden back to the more-than-human and learning to appreciate the effect thereof, the gardeners seemed more and more ready to give up control.

## **5.2 The guilty anthropos: Control and insurgency**

### ***5.2.1 "It is first and foremost my garden."***

While the gardeners actively make space for wild nature in their gardens, their garden practices were still ruled by a sense of entitlement to control due to their ownership status. Often control seemed to be guided by consideration of other people, such as children, neighbours, a landlord. For Nynne, it meant suppressing the thorny blackberry before it takes over the playhouse. Julie removes the stinging nettles that grow too close to where her daughter picks strawberries. Hans Jørn and Eigil both maintain some conventional neatness in their front yards, an incentive that also proves that even though the gardens are private, social norms and expectations still regulate the space. Next to the consideration of others stand the gardeners' sense of entitlement to prioritise their own wishes for the gardens. Examples would be Julie, who cut an unproductive plumtree, Lene, who weeds the elm saplings before they grow too tall and block the lakeside view, or Rikke, who cultivates the non-native buddleja because of their irreplaceable allurements of butterflies. In general, the garden owners were all conscious of prioritising space for native species. Many had previously introduced non-native plants into their gardens due to their conventional aesthetic value, and while most of them were in the process of replacing these plants with native species, some, like Rikke, let a few of the non-native plants stay. When we talked about this, some of the gardeners expressed guilt or embarrassment for allowing non-native plants to grow out of purely selfish reasons. But they also emphasised that they enjoyed the combination of and contrast between the wild and the orderly. This informs us that being a wild garden owner entails a balancing act between giving away control and clinging on to it because of perceived entitlement, emphasising that a private garden, no matter the garden practice, warrants human interference and is charged with social norms.

### ***5.2.2 The experience of allowing and being allowed a place in the garden***

One word, 'allowing', was repeatedly mentioned in all conversations when we discussed the presence of wild species. Edith and Hans Jørn allowed the dandelions to stay on their lawns. Nynne allowed the geraniums to grow in her garden beds. The wild species that returned to the gardens were scrutinised under the gardeners' judgment of whether that exact individual was allowed a space in the garden. Thereby, it might be said that the gardeners are constantly negotiating the status of other beings. The gardeners' attempted balancing between allowing space for the more-than-human while also exercising a level of control has given rise to various insurgencies and unexpected experiences. For example, Lene thought the orange tip butterfly would lay its eggs in her garden as it is full of garlic mustard. That has never happened. On the contrary, when she pruned her Mirabelle tree in good faith

that it would not interrupt any ecological processes, she accidentally disturbed the brown hairstreak butterfly, which has not returned since then. Rikke told me a similar story of encountering conflict with the more-than-human in which she, while encouraging her neighbour that it would be safe to keep a bumblebee nest in his shed, got stung right on her forehead. These experiences of insurgency stand as a reminder of the more-than-human's body language through which they challenge the gardeners' sense of control over what life has a place in the garden. Curiously, there were also instances in which the gardeners' negotiated their own right to be in the garden and described themselves as 'being allowed' a space, for example, when Isa said: "It is not only our place. It is also the bees' place. It is also the insects' place and nature's place. We only have it on loan.". Similarly, Rikke said her garden is not only hers and that it needs to hold space for the life that would have been there even if she was not. In that sense, the act of allowing others and oneself a place in the garden can be seen as an acknowledgement and reflection of the wild garden as a relational space that includes but also goes beyond human beings, which challenges notions of anthropoprivilege and doubt about more-than-human agency.

### ***5.2.3 When the garden is your teacher***

In our conversations, many of the gardeners told me about how they always seem to be learning from their gardens. For example, Isa explained how when she sees something new in her garden, it encourages her to go home and research what she has seen. Lene told me that even though she prioritises her garden space for native plants, she leaves her big rhododendron scrub in her garden because she has observed that the scrub has substantial value as a habitat (see Figure 4). Nynne even shared with me that she thinks the complexities of climate change are more understandable to her after learning about the ecological plexities<sup>2</sup> in her garden. These examples reveal that the ecosystem in a garden, maybe particularly in a wild garden with all its surprises and insurgencies, can be a significant communicator of experiential knowledge.

---

<sup>2</sup> I found this word in Wood's (2001) attempt to get to the root of the word complexity. Although a definition of plexity is unavailable in any recognised dictionary, Wood references SOED entry for *plexus* as a structure [in an animal body] consisting of a network of fibres of vessels closely interwoven and intercommunicating.

Considering eco-phenomenology's commitment to illustrate the biosphere as flesh, I found this definition appropriate to describe the entanglement of life in a garden.





**Figure 4.** Although rhododendron is not native to Denmark, Lene leaves the large scrub as she has seen its significance as a resting place and hide-away for many wild animals. March 13<sup>th</sup>, 2022.

The wild-gardeners approach their gardens with a specific, intentional awareness that brings to their attention the interdependency between species. The wild-gardeners actively challenge normative expectations of how a garden is supposed to look when they give space so the life in the garden can unfold differently than it would have in a conventional garden. Therefore, there may always be something new to learn. Always some new knowledge available through embodied experiences with the more-than-human life.

The second section of the analysis has spurred the following reflection: Taking a step back from managing the private garden gives space for the more-than-human to voice itself. This happens both through insurgencies between the more-than-human and the gardener, who insists on maintaining a level of control, and when the gardener learns something new from being with other species. It seems close at hand to define the embodied experiences of a wild garden as de facto rooted in more-than-human relationships.

### **5.3 Perceiving the Other: Closeness and neutrality**

While the gardeners did not use the expression more-than-human, in our conversations they often described the species living in their gardens with the words ‘the other life’. In their descriptions, the other life encompasses all life forms in the garden other than humans, but especially the species that arrive without the gardeners’ interference, be it the lichen on the apple tree, an unidentifiable little

bee, or a sprouting walnut brought in by a bird (see Figure 5). To all the gardeners, the other life is a significant reason for gardening the way that they do. Hans Jørgen said he likes imagining the rove beetles hunting in his garden at night, which he finds magical and life-affirming. Rikke told me that the other life, which she defined as that which does not benefit her unless she appreciates it, gives her garden a particular character that she enjoys. Lene explained that she never feels alone in her garden because of all the life that it holds. In the following, I delve into the gardeners' perception of the more-than-human as it reveals itself in their descriptions of the other life.



**Figure 5.** Nynne's garden was full of wild plants. This photograph includes both a walnut sapling, a wild rose, and a holly that all sprouted without her involvement, probably assisted by birds. March 9<sup>th</sup>, 2022.

### **5.3.1 Aesthetic appreciation**

Appreciation of the gardens' visual appearances seems significant to all the gardeners. Rikke told me that learning to appreciate the aesthetic of wilderness has been an ongoing process that entails unlearning specific normative beauty standards. Reaching where she is today has been a challenging and lengthy process of doing away with deeply engrained aesthetic preferences. Indeed, she still finds it difficult to value an aphid-infested rose bush. However, Rikke eventually began seeing her garden as a habitat, a living ecosystem for fungi, insects, and other species. Now she finds value in that quality, leading her to see more conventional, decorative plants as undesirable. Similar reflections surfaced in the other conversations that ecological awareness enhances aesthetic preference towards the wild garden. All the gardeners find themselves increasingly appreciative of the wilder appearance of their

gardens, suggesting that direct experiences of and familiarity with ecological processes positively affect aesthetic appreciation.

On insects specifically, the garden owners were generally more attracted to larger, new, or rare species. Lene told me she started seeing pantaloon bees in her garden last year. Edith shared her encounter with a rare butterfly, the mourning cloak. Rikke said that the giant moths let her “feel life in a different way than a tiny insect that can barely be touched without coming apart”. Overall, the diversity and novelty of different bees and butterflies were particularly meaningful to all the gardeners, but they also told me stories of other insects such as hoverflies, may beetles, and winged ants. This narrative of the aesthetic appreciation of the other life in the wild garden leans closer to the classical understanding of aesthetics as the perception of the senses. Engaging with other species through sense-based encounters, such as seeing or feeling, strengthens the gardeners’ bond to the more-than-human life in their gardens, which spills over into their aesthetic appreciation of wilder gardens.

### ***5.3.2 Temporal perception***

Some of the gardeners told me that they experience the change of the seasons differently in their gardens than they would in other natural environments. Helena told me about the decay of autumn, Hans Jørgen about the dormant potential of winter, and Eigil of the first bees heralding spring. I asked them how the experience of the seasons in their gardens is unique. They explained that encountering the same patterns in the same plot of land year after year makes them appreciate the details, the return of familiar species, and the unexpected visit of a new kind of bee or butterfly. At the beginning of March, when I visited them in their gardens, spring had yet to show its full potential. Some of the gardeners described the appearances of their gardens as dull and brown and apologised that there was not much to see. But when they talked about the coming weeks, they expressed excitement about the returning life, buzzing and crawling. Throughout our conversations, it became clear that the other life in the garden is experienced not only in space but also in time. This is apparent in the lengthy process of learning to acknowledge and appreciate the aesthetic of the wild garden, but also in the seasonal aspect of experiencing the other life. For this reason, the private garden can be considered a particularly potent place to explore and experience relationships with the more-than-human because it allows for these experiences to extend through time.

### ***5.3.3 The value of a neutral relationship***

When I began this study by reflecting on my assumptions about human-nature relationships, I wondered if I would find gardeners who felt empathy for insects or projected their human emotions

onto other beings because they cared so much. To my surprise, empathy and compassion for other species were rarely mentioned in our conversations. Even when I asked the gardeners directly about their feelings for the other life, they were reluctant to assume an emotional bond, at least not one comparable to those between humans. When empathy and perceived emotional reciprocity did appear in the conversations, it was in the descriptions of relations with pets or other tame animals (e.g., chickens, domesticated bees) and not of wild species. Most of the gardeners were distraught by biodiversity loss, and their grief about the environmental crisis was a primary reason for their way of gardening. But in their interspecies relations, emotions were described as personal and one-sided, and the gardeners' urge to experience closeness with the other life was imbued with a kind of neutrality. However, this neutrality does not mean that they saw other species as passive objects for the human experience. Rikke said she never doubts that insects are entirely careless about her. Lene asserted that the bees in her garden are used to her presence. A few of them began to describe nature as non-judgemental. From these accounts, I gather that the gardener's experiences are shaped by a recognition of other species as individuals. Although they do not experience empathetic relationships with insects, the gardeners recognise that the insects in their gardens are aware and even have a degree of agency as they can exert carelessness or neutrality. The gardeners and the insects simply *are* in the garden together, and the mutual sensory experience is not bound to a direct emotional bond but rather to the commonality and acknowledgement of each other's embodied presence. Here also comes to mind the many times one of the gardeners would pause our conversation to point to a bird that landed close by, a bee collecting nectar in one of the lawn flowers, or a mouse rummaging around a brush pile (see Figure 6). The gardeners' awareness and acknowledgement of the species around them and those individuals' success in making themselves a part of our conversation emphasised that the gardeners are likely to see themselves as beings amongst other beings in a wild garden. Thereby, the wild garden appears less of a concrete place and more of a relational space of attentive embodied participation and anticipation.





**Figure 6.** While we were talking about Julie’s pile of garden waste, I spotted a mouse. She said, “Yes, I can tell a mouse lives here. That’s how it is. How nice you saw it. ‘I live here too’”. March 4<sup>th</sup>, 2022.

#### **5.4 Beyond the garden: The passing on of knowledge and experience**

Aside from the experiences the gardeners have within their gardens, the scope of their agency in supporting Danish nature also reaches beyond the garden. In all conversations, the gardeners brought up the community around wild gardening that they have established with other people. For example, in Edith’s and Hans Jørgen’s local communities, they have arranged garden walks to learn from each other’s wild garden practices. Further, Helena decided to invite her next-door neighbours to participate in her experience of insects by establishing a shared habitat fence (see Figure 7). Similarly, Isa talked to her nephew about the life of fungi and why they are, after all, not that disgusting.



**Figure 7.** When the fence blew down during a storm, Helena decided with her neighbour to replace it with a habitat fence and, in that way, share the experience of the wild garden. March 7<sup>th</sup>, 2022.

All the gardeners seemed inspired to challenge the common perception of nature and to motivate others to reconsider their garden practices. Some even found that they had more responsibility to care through sharing because of their passion and knowledge. However, they all expressed doubt about whether their individual actions could have any significance for the Danish nature. Despite their ambitions to make their garden spaces more ecologically attuned, most of the gardeners thought their gardens were too small to matter. Furthermore, some of them were reluctant to take on too much responsibility. For example, while Egil felt that it was only right to support the natural environment, he was ambiguous about his responsibility within his own private garden space. Similarly, Rikke argued that while she is responsible for giving space to the other life, it will still happen on her terms. These conflicting considerations about responsibility for nature are yet another manifestation of the anthroprivileged feeling of entitlement sustained by ownership. However, their concerns about agency also seemed to be rooted in doubt about the weight of an individual's actions in the face of ecological disaster. Therefore, I asked them about the potential in the actions of a whole community and how they might support the realisation of those actions. Many of the gardeners told me they did not find it helpful to force sustainable garden practices onto people. Instead, they hoped for a more open and dynamic public discussion about the current discourse on nature, human relation to it, and the changes in the natural environment we see today and expect to see in the future.

Furthermore, many of the gardeners told me they enjoy sharing pictures and stories both online and offline of the insects that visit their gardens. For example, Rikke said being able to share her experiences and take part in the experiences of others is a significant contributor to the ongoing fascination and joy she finds in the life in her garden. This shows us that more-than-human relationships can inspire sustainable change when wild-gardeners leave their private gardens to show and tell others of their experiences with gardening alongside nature.

## **6 Discussion**

In this section, I summarise the key findings in response to the overarching research question and sub-question 1 on how other species, particularly insects, are experienced by and motivate the garden practice of the urban wild-gardeners (6.1). Then, I answer sub-question 2 on how the eco-phenomenological approach can further sustainable change concerning sustainability science (6.2) and civil society (6.3). Finally, I consider some of the study's limitations and suggestions for further research (6.4).

## **6.1 The Flesh of the urban wild garden**

As portrayed in the analysis, insects are fundamental to the lived, embodied experience of an urban wild garden. They steer the gardens' visual appearance as the gardeners seek to improve living conditions for native species. They challenge the gardeners' knowledge and perception of the natural world through conflict and insurgency. They confront the gardeners' understanding of themselves as a part of an ecological community. They encourage the urban gardeners to submerge themselves and others in learning about nature from nature. These aspects of the more-than-human experience within the wild garden contribute to its potential for challenging anthropocentric and anthroprivileged perspectives. Experiencing insects in a wild garden is not experiences of objects without agency. Instead, they are experiences full of surprises, insurgencies, and novelty as insect species interrupt and make themselves heard through their body language. When the wild-gardeners began their journeys towards more ecologically supportive garden practices, they certainly had a vision and an ambition to support native insect and plant species. But while the gardeners still learn about wild-gardening from sources outside of their gardens, direct sensuous experiences with other species are now at the core of their garden practices. It happens when butterflies inform of a mistaken pruning by disappearing, when bees visit dandelions more frequently than non-native flowers, or when a bird plants a walnut tree in the middle of a flower bed. With the awareness of other species comes respect and a sense of communion. That the gardeners consider this communion neutral and one-sided in terms of empathy is not a barrier to feeling close to the more-than-human. Instead, this quality of the gardeners' relationships with insects ensures the voice and agency of the latter. This is further emphasised by the fact that the wild gardens do not appear homogeneous. Even if the biodiversity-supportive features they implement are similar, the garden owners have different more-than-human experiences and therefore learn from their garden through different pathways. Starting with a motivation to support nature and seeing the species in the gardens react when this motivation is put into practice strengthens the relationship between the gardeners and the life in their gardens. It also further encourages an eco-centric gardening practice, which benefits both the gardener and the insects with whom the garden is shared.

## **6.2 Implications for sustainability science**

In this section, I situate my study and findings within relatable frameworks and theories common to sustainability science. As a field dedicated to studying (and transforming) the ways humans interact with the natural environment, sustainability science's contribution to more-than-human research could be paramount (Kates, 2011; Nagatsu et al., 2020). Within the field, we already find several recent

attempts to rectify the separation of humans and the more-than-human, for example, in research on environmental ethics and the development of a multispecies sustainability concept (Chapron et al., 2019; Davies & Riach, 2019; Rupprecht et al., 2020). However, replacing one conceptual system with another needs to occur with a corresponding societal change, calling for more concrete studies of the lived experience of the more-than-human. Turning our attention to eco-phenomenology may help breathe new life into sustainability science regarding ontological and methodological shortcomings in terms of the more-than-human.

Phenomenology's resolution to start from experience rather than theoretical abstractions indicates its compatibility with sustainability science. Firstly, phenomenological arguments against context- and value-free ideals are also a foundational part of sustainability science (Caniglia et al., 2017; Wiek et al., 2011). As exemplified in my analysis, the gardeners' experiences with the more-than-human is inseparable from them finding value in and motivation to continue their garden practice. Secondly, sustainability science's grounds for considering nature valuable and arguments that nature should be treated in a certain way are intrinsically normative (Miller et al., 2014; Nagatsu et al., 2020). Therefore, sustainability science's inquiries about human-nature relationships ought to be rooted in the *experience* of nature to avoid painting a detached picture of nature that is highly unlikely to inspire the desired level of change (Brown, 2003). As previously mentioned, sustainability science still falls back on a reductionist and detached representation of the biosphere, where all species beyond the human are frequently collapsed into one binary category (Rupprecht et al., 2020; Steffen et al., 2015). This approach fails to fully account for the interdependencies and -connections that enliven all life forms, human and more-than-human, restricting our analytical scope and ability to meet sustainability goals.

Embodied experience could be implemented in sustainability in numerous ways. In research engaged with the sense of place concept, Raymond et al. (2017) have already identified a lack of focus on embodied and experience-based research. While sense of place is commonly discussed within resilience studies, emphasis on embodiment is only recently gaining ground (Cooke et al., 2016; Masterson et al., 2017). As the gardeners in my study expressed, connecting to and learning from their experiences of the same natural space through time has been essential to their ecological awareness and for them to see themselves as a part of the garden ecology. Therefore, exploring the role of the body in people-place relations needs to be better accounted for.

Reflections on embodied experiences are also lacking in research on ecosystem services. Generally understood as the "benefits that humans receive from the natural functioning of healthy ecosystems" (Jeffers et al., 2015, p. 17), studies have already pointed out that this definition is one-sided when seen in the light of the reciprocal relations often found between indigenous people and nature (Comberti



et al., 2015; Normyle et al., 2022; Plieninger et al., 2014). However, very few researchers situate their research in modern, urban environments. Is this because we assume urban populations are estranged from the more-than-humans providing the ecosystem services? Then eco-phenomenological inquiries into the relations between modern humans and their urban environment might contribute to a different perspective of human-nature entanglement. At least in my study, the gardeners seem well-aware that their relationships with the more-than-human species in their gardens stimulate mutual flourishing. When disregarding the embodied more-than-human experience in ecosystem services, we risk overlooking essential aspects of human life that only arise through coexistence. Introducing the notion of embodied experience to conceptualise urban people's valuation of nature could be a worthwhile addition to the ecosystem service construct leading to a greater understanding of human-nature relationships (Pramova et al., 2022).

As a science that studies the unpredictable, precarious reality of the world, sustainability science must consider "our spontaneous, pre-conceptual experience" as something more than merely subjective (Abram, 1996/2017, p. 61). Considering human experiences of and with the more-than-human, and not only in studies of indigenous cultures, is a fruitful starting point for broadening the sustainability concepts. Studies such as mine show the significance of more-than-human experiences in shaping a human's ecological awareness. They also help us understand and justify alternative and environmentally friendly conceptions of relationships between modern, urban humans and more-than-humans beyond a simple sense of well-being.

### **6.3 Implications outside the sciences**

Returning to Springer's (2021) concept of anthroprivilege, he argues that once privilege has been bestowed, the best way to preserve it is to pretend it does not exist. Therefore, mending the relationship between humans and the more-than-human must take place, at least in part, at the level of direct, embodied confrontations with the natural environment. But grappling with anthroprivilege in relation to wild nature requires a degree of exposure that urban people seldom face. Even the gardeners in my study, who appeared considerate of the rights and agency of other species, are not above the anthroprivileged position as they prioritise their own needs and wants for their gardens. But acceptance and acknowledgement of their privilege seem more readily available to them as they are actively confronted with it through the more-than-human experiences, for example when Rikke, despite her unwillingness, leaves her roses to the aphids. Both among the gardeners in my study and in other studies on human-nature relations, more-than-human experiences have revealed themselves as critical to fostering pro-environmental attitudes (Ginn, 2014; Häggström, 2019). Thus, increased

awareness of the significance of direct embodied experience with the more-than-human could be effectively implemented in education and broader environmental policy changes. For example, by increasing the opportunities urban citizens have in terms of more-than-human experiences. However, research shows that people will not use a natural area simply because it is easily accessible and has high recreational and aesthetic value (Lin et al., 2014). Likewise, ethical concern for nonhuman species is not only determined by the quantity of experiences but also by how respectful and caring those experiences are (Pitt, 2018). Therefore, increasing opportunities for more-than-human experiences has to occur in tandem with improving people's environmental orientation. This could be encouraged through children's and adults' environmental education embedded in place-based, embodied learning, potentially in a wild garden (Pitt, 2018; Semken et al., 2017; Soga & Gaston, 2016).

In her reflections on rewilding in a modern society, Jørgensen (2015) argues that rewilding is not an act of going back in time but rather about giving space for wild and spontaneous nature to grow. It is about the gesture of letting nature decide more and humans less. The gardeners in my study embody this notion of rewilding through their garden practices in which they neither deny themselves nor other species a say. As described in the analysis, a level of control and management still shapes the gardeners' engagement with their gardens, and it is inarguable that the gardeners see themselves as the stewards of their gardens. However, the understanding of stewardship that emerges from my study differs from its common use in the context of social-ecological systems as an approach that enhances "ecological resilience and supports human well-being through the provision of ecosystem services" (Mathevet et al., 2018, p. 364). Instead, it is a relational stewardship that continuously ebbs and flows as the more-than-human is intentionally 'allowed' to participate in stewarding the garden space. Reinforcing the notion of human relationship with the more-than-human as stewardship may risk strengthening instrumental and detached approaches to nature management (Buijs et al., 2018). Still, it is yet to be seen whether gardening practices can exist without management. Therefore, conservation outreach might continue to understand and communicate gardening in terms of stewardship while simultaneously prioritising more-than-human involvement and further exploring options for implementing embodied and relational experiences.

Taking it further than just the involvement of the gardener and the more-than-human within the garden, my analysis emphasises the significance of embodied community-based learning. The gardeners both passed on and gained practical experience from interacting with other people interested in wild gardening, but they also cultivated a sense of closeness with the more-than-human by sharing stories of their experiences. More-than-human experiences within a wild garden prompt knowledge sharing and hold potential for sustainable transformation of the gardener as an individual

and of their extended community. Therefore, grounding environmental education in the moving, sensory, and ecologically embedded body may not only affect those directly engaged but also local communities, family relations and beyond. As exemplified in my methodology and conversations with the gardeners, social media such as Facebook provide a platform for engaging with other people on more-than-human experiences. However, this method might not reach people who do not have access to pro-environmental communities or are less inclined to care for nature. Again, this calls for an increased effort to improve people's environmental orientation, showing that encouraging sustainable relationships between humans and nonhumans is an iterative process requiring several undertakings.

Finally, both sustainability science and this study connect to activism, considering their shared ambition to challenge structures and norms for a more sustainable future (Miller et al., 2014). In the context of my research, the structures and norms challenged are the common unsustainable and anthropocentric gardening practices, as well as the positioning towards nonhuman species that comes from cultivating a garden this way. In a sense, the urban wild garden is a political space that demands us to reflect on some of the most fundamental questions in sustainability science: Whose needs are met, who holds the power, and who is subordinated (Kates, 2012; PNAS, 2010). Conscious or not, the garden owners in this study perform small activist actions when they share their garden experiences with others through conversation or when Helena, for example, persuades her neighbour to share a habitat fence. While garden practices are most often driven by instrumental relationships with other species, in an urban wild garden, when the gardener learns to care without exercising power, these questions are reconsidered in a multispecies context (Pitt, 2018). In the middle of the many socio-environmental problems that confront us today, a study on the relationships and experiences shared between gardeners and insects is ever relevant. It is so because it provides an example that humans can learn to care for other beings in inevitably complex yet non-instrumental ways in which we are apart and yet a part of the Flesh.

#### **6.4 Limitations and future work**

As discussed in the analysis, being in the wild garden spatially and temporally influences the gardeners' experiences of the more-than-human. Therefore, to fully understand the phenomenon in question, the researcher must be engaged both spatially and temporally. While I fulfilled the former by meeting with the garden owners in their gardens, the latter was compromised by the fact that I was only in the gardens for a very short amount of time. As phenomena permeated by relationality, both the wild garden and the more-than-human experience were impacted by the data being collected in the early springtime. To fully explore the living, growing, and temporally extended experiences of a wild garden

would require multiple visits throughout the year. Visiting the gardens in the full bloom of summer would undoubtedly impact which stories and experiences the gardeners told me.

Springer (2021) asserts that acknowledging that we speak from a situated position does not change that our bodies and ideas are still human and, therefore, privileged. My study is centred around the human experience of other species and, as such, it is unavoidably anthropocentric. While understanding human experiences of the more-than-human is a fundamental aspect of learning about our being-in-the-world, future studies within sustainability science should be encouraged to centre the more-than-human. Inspiration might be drawn from the works of Anna Tsing (2015), Pitt (2015), and Maller (2021). While my study reflects their way of thinking, it still faces obstacles in relying on verbal accounts of human actors.

As touched upon, nature is a concept loaded with different meanings and interpretations. Therefore, it would be constructive for future research to delve more thoroughly into the wild-gardeners understanding of concepts of insects, nature, and wild(er)ness to understand the histories, linguistic frameworks, and mythologies in which they are grounded.

While my study revolves around the more-than-human experiences of private gardeners, the community aspect of more-than-human experiential knowledge sharing could be further explored by carrying out a similar study within community gardens. Likewise, the impact of urbanity on the gardeners' human-nature perception could be amplified by performing a similar study in much larger city areas, maybe even in roof-top gardens or by engaging with balcony gardeners.

While my study cannot be considered transdisciplinary, there is much potential for transdisciplinarity in future research, for example, by exploring embodied garden-based research methods, where gardener and researcher study more-than-human relations together. Something similar has been attempted by Elton (2021), who worked with urban gardeners in Toronto to develop a methodology to account for plant agency. Furthermore, I recommend exploring making more-than-human science available to other societal actors through wild gardens with a particular focus on embodied, sensory experiences. Here, I am suggesting a type of synaesthetic sustainability science paying greater respect to the role of our senses in the production of knowledge. I refer once again to the previously mentioned article by Cooke et al. (2016), but also to Myers' (2015) fascinating research on aesthetic entanglement, and Heinrichs' (2019) call for a sustainability concept that acknowledges the "sensoriality and corporality of human existence".

## 7 Conclusion

Throughout this thesis, the picture that has slowly formed is one of the urban wild garden as a relational space of plexity, insurgency, intentional awareness, and neutral relationality. By seeing the more-than-human experiences of a wild-gardener through an eco-phenomenological lens, I have exemplified that urban, modern humans can challenge the profoundly flawed, dualistic ontology, form closer relationships with insects, and reconnect with their ecological belonging in the Flesh. I have also shown that a wild-gardener's experience of the more-than-human is a source of both personal and communal transformation towards more ecologically conscious and sustainable relationships with insects and other nonhuman species.

Going about sustainability eco-phenomenologically opens up for critical reflections on the practices and ideas that remain frequently unconsidered by both researchers and societal actors. This thesis suggests how sustainability science can navigate a world where hierarchical structures such as the differentiation between humans and the more-than-human appear outdated and, therefore, should be thoroughly re-examined.

Today, we look to the sciences and technologies for solutions to serious environmental problems. Still, philosophically grounded studies like the one you have just experienced have much to offer in terms of coming to understand socio-ecological systems from a less anthropocentric point of view. I have presented a method of learning about such systems that is up-close and connected to the innate principles of our intertwined being-in-the-world. Emphasising embodied experience and perception, the eco-phenomenological approach of my study exemplifies that human beings, through our bodies, are an integral part of an ecological community even before we consider ourselves to be so. A wild garden could be one of the places we retrieve that understanding of ourselves.

## 8 References

- Abram, D. (2017). *The spell of the sensuous: Perception and language in a more-than-human world*. Vintage Books. (Original work published 1996)
- Bannon, B. E. (2011). Flesh and Nature: Understanding Merleau-Ponty's Relational Ontology. *Research in Phenomenology*, 41(3), 327–357. <https://doi.org/10.1163/156916411X594431>
- Bastien, B., & Kremer, J. W. (2004). *Blackfoot Ways of Knowing: The Worldview of the Siksikaitsitapi*. University of Calgary Press.
- Beck, T. B. (2002). Gardeners Perceptions of the Aesthetics, Manageability, and Sustainability of Residential Landscapes. *Applied Environmental Education & Communication*, 1(3), 163–172. <https://doi.org/10.1080/15330150214006>
- Bell-Williams, R., Irvine, K. N., Reeves, A., & Warber, S. (2021). *Digging deeper: Gardening as a way to develop non-human relationships through connection with Nature*. 18.
- Bhatti, M., Church, A., Claremont, A., & Stenner, P. (2009). 'I Love Being in the Garden': Enchanting Encounters in Everyday Life. *Social & Cultural Geography*, 10. <https://doi.org/10.1080/14649360802553202>
- Bronstein, J. L. (2015). *Mutualism*. Oxford University Press.
- Brown, C. S. (2003). The Real and the Good: Phenomenology and the Possibility of an Axiological Rationality. In C. S. Brown & T. Toadvine (Eds.), *Eco-phenomenology: Back to the Earth Itself*.
- Brown, C. S., & Toadvine, T. (2003). *Eco-phenomenology: Back to the Earth Itself*. State University of New York Press.
- Buijs, A., Fischer, A., & Muhar, A. (2018). From urban gardening to planetary stewardship: Human–nature relationships and their implications for environmental management. *Journal of Environmental Planning and Management*, 61(5–6), 747–755. <https://doi.org/10.1080/09640568.2018.1429255>
- Bunnin, N., & Yu, J. (2004). *The Blackwell dictionary of Western philosophy*. Blackwell Pub.
- Caniglia, G., Schöpke, N., Lang, D. J., Abson, D. J., Luederitz, C., Wiek, A., Laubichler, M., Gralla, F., & von Wehrden, H. (2017). Experiments and evidence in sustainability science: A typology. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2017.05.164>

- Chan, Z., Fung, Y., & Chien, W. (2015). Bracketing in Phenomenology: Only Undertaken in the Data Collection and Analysis Process. *The Qualitative Report*. <https://doi.org/10.46743/2160-3715/2013.1486>
- Chapron, G., Epstein, Y., & López-Bao, J. V. (2019). A rights revolution for nature. *Science*, *363*(6434), 1392–1393. <https://doi.org/10.1126/science.aav5601>
- Clayton, S. (2007). Domesticated nature: Motivations for gardening and perceptions of environmental impact. *Journal of Environmental Psychology*, *27*(3), 215–224. <https://doi.org/10.1016/j.jenvp.2007.06.001>
- Comberti, C., Thornton, T. F., Wyllie de Echeverria, V., & Patterson, T. (2015). Ecosystem services or services to ecosystems? Valuing cultivation and reciprocal relationships between humans and ecosystems. *Global Environmental Change*, *34*, 247–262. <https://doi.org/10.1016/j.gloenvcha.2015.07.007>
- Conservation International. (n.d.). *Nature Is Speaking*. Retrieved 9 April 2022, from <https://www.conservation.org/nature-is-speaking>
- Cooke, B., West, S., & Boonstra, W. J. (2016). Dwelling in the biosphere: Exploring an embodied human–environment connection in resilience thinking. *Sustainability Science*, *11*(5), 831–843. <https://doi.org/10.1007/s11625-016-0367-3>
- Danmarks Vilde Haver*. (n.d.). Danmarks vilde haver. Retrieved 27 April 2022, from <https://danmarksvildehaver.dk/>
- Davelaar, D. (2021). Transformation for sustainability: A deep leverage points approach. *Sustainability Science*, *16*(3), 727–747. <https://doi.org/10.1007/s11625-020-00872-0>
- Davies, O., & Riach, K. (2019). From mainstream measuring to multispecies sustainability? A gendered reading of bee-ing sustainable. *Gender, Work & Organization*, *26*(3), 246–266. <https://doi.org/10.1111/gwao.12245>
- Derby Lewis, A., Bouman, M. J., Winter, A. M., Hasle, E. A., Stotz, D. F., Johnston, M. K., Klinger, K. R., Rosenthal, A., & Czarnecki, C. A. (2019). Does Nature Need Cities? Pollinators Reveal a Role for Cities in Wildlife Conservation. *Frontiers in Ecology and Evolution*, *7*. <https://www.frontiersin.org/article/10.3389/fevo.2019.00220>
- Diduck, A. P., Raymond, C. M., Rodela, R., Moquin, R., & Boerchers, M. (2020). Pathways of learning

- about biodiversity and sustainability in private urban gardens. *Journal of Environmental Planning and Management*, 63(6), 1056–1076.  
<https://doi.org/10.1080/09640568.2019.1633288>
- #DKVILD. (n.d.). *Sammen om et VILDERE Danmark*. #DKVILD. Retrieved 27 April 2022, from <https://dkvild.dk/>
- Eggleton, P. (2020). The State of the World’s Insects. *Annual Review of Environment and Resources*, 45(1), 61–82. <https://doi.org/10.1146/annurev-environ-012420-050035>
- Ejrnæs, R., Nygaard, B., Kjær, C., Baattrup-Pedersen, A., Brunbjerg, A. K., Clausen, K., Fløjgaard, C., Hansen, J. L. S., Hansen, M. D. D., Holm, T. E., Johnsen, T. J., Johansson, L. S., Moeslund, J. E., Sterup, J., Hansen, R. R., Standberg, B., Søndergaard, M., & Wiberg-Lasen, P. (2021). *Danmarks biodiversitet 2020 – Tilstand og udvikling*. Aarhus Universitet.
- Elton, S. (2021). Growing Methods. *Environmental Humanities*, 13(1), 93–112.  
<https://doi.org/10.1215/22011919-8867219>
- Freeman, C., Dickinson, K. J. M., Porter, S., & van Heezik, Y. (2012). “My garden is an expression of me”: Exploring householders’ relationships with their gardens. *Journal of Environmental Psychology*, 32(2), 135–143. <https://doi.org/10.1016/j.jenvp.2012.01.005>
- Gilbert, S. F. (2014). A holobiont birth narrative: The epigenetic transmission of the human microbiome. *Frontiers in Genetics*, 5.  
<https://www.frontiersin.org/article/10.3389/fgene.2014.00282>
- Ginn, F. (2014). Sticky lives: Slugs, detachment and morethanhuman ethics in the garden. *Transactions of the Institute of British Geographers*, 39(4), 532–544.
- Häggström, M. (2019). Lived experiences of being-in-the-forest as experiential sharing with the more-than-human world. *Environmental Education Research*, 25(9), 1334–1346.  
<https://doi.org/10.1080/13504622.2019.1633275>
- Hailwood, S. (2014). Estrangement, Nature and ‘the Flesh’. *Ethical Theory and Moral Practice*, 17(1), 71–85.
- Hatfield, G. (2018). René Descartes. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2018). Metaphysics Research Lab, Stanford University.  
<https://plato.stanford.edu/archives/sum2018/entries/descartes/>



- Haveselskabet. (2020). *Naturen får frit spil i danske haver*.  
<https://via.ritzau.dk/pressemeddelelse/naturen-far-frit-spil-i-danske-haver?publisherId=13560062&releaselId=13604455>
- Head, L., & Muir, P. (2006). Suburban Life and the Boundaries of Nature: Resilience and Rupture in Australian Backyard Gardens. *Transactions of the Institute of British Geographers*, 31(4), 505–524.
- Heinrichs, H. (2019). Strengthening Sensory Sustainability Science—Theoretical and Methodological Considerations. *Sustainability*, 11(3), 769. <https://doi.org/10.3390/su11030769>
- Hitchings, R. (2003). People, plants and performance: On actor network theory and the material pleasures of the private garden. *Social & Cultural Geography*, 4(1), 99–114.  
<https://doi.org/10.1080/1464936032000049333>
- Howarth, J. M. (1995). The Crisis of Ecology: A Phenomenological Perspective. *Environmental Values*, 4(1), 17–30.
- Husserl, E. (2002). *Ideas: General introduction to pure phenomenology*. Routledge. (Original work published 1931)
- Ingold, T. (2021). *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*. Routledge. <https://doi.org/10.4324/9781003196662>
- IPBES (2019). Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany.
- IPCC (2022). Summary for Policymakers [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Lösschke, V. Möller, A. Okem (eds.)]. In: *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S.

- Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)). Cambridge University Press. In Press
- Jeffers, E. S., Nogué, S., & Willis, K. J. (2015). The role of palaeoecological records in assessing ecosystem services. *Quaternary Science Reviews*, *112*, 17–32.  
<https://doi.org/10.1016/j.quascirev.2014.12.018>
- Jones, M. S., Teel, T. L., Solomon, J., & Weiss, J. (2021). Evolving systems of pro-environmental behavior among wildscape gardeners. *Landscape and Urban Planning*, *207*, 104018.  
<https://doi.org/10.1016/j.landurbplan.2020.104018>
- Jørgensen, D. (2015). Rethinking rewilding. *Geoforum*, *65*, 482–488.  
<https://doi.org/10.1016/j.geoforum.2014.11.016>
- Karban, R., Huntzinger, M., & Pearse, I. S. (2014). *How to do ecology: A concise handbook* (Second edition). Princeton University Press.
- Kates, R. W. (2011). What kind of a science is sustainability science? *Proceedings of the National Academy of Sciences*, *108*(49), 19449–19450. <https://doi.org/10.1073/pnas.1116097108>
- Kates, R. W. (2012). From the Unity of Nature to Sustainability Science: Ideas and Practice. In M. P. Weinstein & R. E. Turner (Eds.), *Sustainability Science: The Emerging Paradigm and the Urban Environment* (pp. 3–19). Springer. [https://doi.org/10.1007/978-1-4614-3188-6\\_1](https://doi.org/10.1007/978-1-4614-3188-6_1)
- Kessler, N. H. (2019). *Ontology and Closeness in Human-Nature Relationships: Beyond Dualisms, Materialism and Posthumanism*. Springer International Publishing.  
<https://doi.org/10.1007/978-3-319-99274-7>
- Keto, S., & Foster, R. (2021). Ecosocialization – an Ecological Turn in the Process of Socialization. *International Studies in Sociology of Education*, *30*(1–2), 34–52.  
<https://doi.org/10.1080/09620214.2020.1854826>
- Kopnina, H., Washington, H., Taylor, B., & J Piccolo, J. (2018). Anthropocentrism: More than Just a Misunderstood Problem. *Journal of Agricultural and Environmental Ethics*, *31*(1), 109–127.  
<https://doi.org/10.1007/s10806-018-9711-1>
- Langer, M. (2003). Nietzsche, Heidegger, and Merleau-Ponty: Some of Their Contributions and Limitations for ‘Environmentalism’. In T. Toadvine & C. S. Brown (Eds.), *Eco-phenomenology: Back to the Earth Itself*. State University of New York Press.

- Lerman, S. B., Turner, V. K., & Bang, C. (2012). Homeowner Associations as a Vehicle for Promoting Native Urban Biodiversity. *Ecology and Society*, 17(4). <https://doi.org/10.5751/ES-05175-170445>
- Lien, M. E., & Pálsson, G. (2021). Ethnography Beyond the Human: The ‘Other-than-Human’ in Ethnographic Work. *Ethnos*, 86(1), 1–20. <https://doi.org/10.1080/00141844.2019.1628796>
- Lin, B. B., Fuller, R. A., Bush, R., Gaston, K. J., & Shanahan, D. F. (2014). Opportunity or Orientation? Who Uses Urban Parks and Why. *PLoS ONE*, 9(1), e87422. <https://doi.org/10.1371/journal.pone.0087422>
- Maller, C. (2021). Re-orienting nature-based solutions with more-than-human thinking. *Cities*, 113. <https://doi.org/10.1016/j.cities.2021.103155>
- Masterson, V., Stedman, R., Enqvist, J., Tengö, M., Giusti, M., Wahl, D., & Svedin, U. (2017). The contribution of sense of place to social-ecological systems research: A review and research agenda. *Ecology and Society*, 22(1). <https://doi.org/10.5751/ES-08872-220149>
- Mathevet, R., Bousquet, F., & Raymond, C. M. (2018). The concept of stewardship in sustainability science and conservation biology. *Biological Conservation*, 217, 363–370. <https://doi.org/10.1016/j.biocon.2017.10.015>
- Merleau-Ponty, M. (1968). *The visible and the invisible: Followed by working notes* (C. Lefort, Ed.). Northwestern University Press.
- Miller, T. R., Wiek, A., Sarewitz, D., Robinson, J., Olsson, L., Kriebel, D., & Loorbach, D. (2014). The future of sustainability science: A solutions-oriented research agenda. *Sustainability Science*, 9(2), 239–246. <https://doi.org/10.1007/s11625-013-0224-6>
- Minteer, B. A. (2017, January 26). *Environmental Ethics, Sustainability Science, and the Recovery of Pragmatism*. The Oxford Handbook of Environmental Ethics. <https://doi.org/10.1093/oxfordhb/9780199941339.013.46>
- Muhar, A., & Böck, K. (2018). Mastery over nature as a paradox: Societally implemented but individually rejected. *Journal of Environmental Planning and Management*, 61(5–6), 994–1010. <https://doi.org/10.1080/09640568.2017.1334633>
- Mumaw, L., & Bekessy, S. (2017). Wildlife gardening for collaborative public–private biodiversity conservation. *Australasian Journal of Environmental Management*, 24(3), 242–260.

<https://doi.org/10.1080/14486563.2017.1309695>

Myers, N. (2015). Conversations on Plant Sensing. *NatureCulture*, 32.

Nagatsu, M., Davis, T., DesRoches, C. T., Koskinen, I., MacLeod, M., Stojanovic, M., & Thorén, H. (2020). Philosophy of science for sustainability science. *Sustainability Science*, 15(6), 1807–1817. <https://doi.org/10.1007/s11625-020-00832-8>

Normyle, A., Vardon, M., & Doran, B. (2022). Ecosystem accounting and the need to recognise Indigenous perspectives. *Humanities and Social Sciences Communications*, 9(1), 1–7. <https://doi.org/10.1057/s41599-022-01149-w>

Norton, B. A., Shang, B., Ramsey, A. D., & Sheffield, D. (2021). Definitions of biodiversity from urban gardeners. *Journal of Urban Ecology*, 7(1), juab005. <https://doi.org/10.1093/jue/juab005>

O’Neill, M., & Roberts, B. (2019). The phenomenology of walking in a garden. In *Walking Methods: Research on the Move* (1st Edition). Routledge.

Petersen, L. K. (2013). The Materiality of Everyday Practices in Urban Greenspace. *Journal of Environmental Policy & Planning*, 15(3), 353–370. <https://doi.org/10.1080/1523908X.2013.766576>

Petersen, L. K. (2021). Engaging with nature through the dwelling practices in garden landscapes. *Social & Cultural Geography*, 22(1), 11–32. <https://doi.org/10.1080/14649365.2018.1550803>

Petersen, L. K., Levin, G., Ejernæs, R., Zandersen, M., Jensen, A., & Brunbjerg, A. K. (2014). *Parcelhushaven—En del af byens natur* (No. 90). Aarhus Universitet, DCE – Nationalt Center for Miljø og Energi.

Pitt, H. (2015). On showing and being shown plants - a guide to methods for more-than-human geography: On showing and being shown plants. *Area*, 47(1), 48–55. <https://doi.org/10.1111/area.12145>

Pitt, H. (2018). Questioning care cultivated through connecting with more-than-human communities. *Social & Cultural Geography*, 19(2), 253–274. <https://doi.org/10.1080/14649365.2016.1275753>

Plieninger, T., van der Horst, D., Schleyer, C., & Bieling, C. (2014). Sustaining ecosystem services in cultural landscapes. *Ecology and Society*, 19(2). <https://doi.org/10.5751/ES-06159-190259>

- PNAS. (2010). *Sustainability Science*. PNAS. <http://www.pnas.org/sustainability-science>
- Power, E. R. (2005). Human–Nature Relations in Suburban Gardens. *Australian Geographer*, 36(1), 39–53. <https://doi.org/10.1080/00049180500050847>
- Pramova, E., Locatelli, B., Valdivia-Díaz, M., Vallet, A., Quispe Conde, Y., Djoudi, H., Colloff, M. J., Bousquet, F., Tassin, J., & Munera Roldan, C. (2022). Sensing, feeling, thinking: Relating to nature with the body, heart and mind. *People and Nature*, 4(2), 351–364. <https://doi.org/10.1002/pan3.10286>
- Raymond, C. M., Kyttä, M., & Stedman, R. (2017). Sense of place, fast and slow: The potential contributions of affordance theory to sense of place. *Frontiers in Psychology*, 8. <https://doi.org/10.3389/fpsyg.2017.01674>
- Rupprecht, C. D. D., Vervoort, J., Berthelsen, C., Mangnus, A., Osborne, N., Thompson, K., Urushima, A. Y. F., Kóvskaya, M., Spiegelberg, M., Cristiano, S., Springett, J., Marschütz, B., Flies, E. J., McGreevy, S. R., Droz, L., Breed, M. F., Gan, J., Shinkai, R., & Kawai, A. (2020). Multispecies sustainability. *Global Sustainability*, 3. <https://doi.org/10.1017/sus.2020.28>
- Semken, S., Ward, E. G., Moosavi, S., & Chinn, P. W. U. (2017). Place-Based Education in Geoscience: Theory, Research, Practice, and Assessment. *Journal of Geoscience Education*, 65(4), 542–562. <https://doi.org/10.5408/17-276.1>
- Smith, M. (2013). Ecological Community, the Sense of the World, and Senseless Extinction. *Environmental Humanities*, 2(1), 21–41. <https://doi.org/10.1215/22011919-3610333>
- Soga, M., & Gaston, K. J. (2016). Extinction of experience: The loss of human–nature interactions. *Frontiers in Ecology and the Environment*, 14(2), 94–101. <https://doi.org/10.1002/fee.1225>
- Springer, S. (2021). Check Your Anthroprivilege! Situated Knowledge and Geographical Imagination as an Antidote to Environmental Speciesism, Anthroparchy, and Human Fragility. *Vegan Geographies*.
- Starks, H., & Brown Trinidad, S. (2007). Choose Your Method: A Comparison of Phenomenology, Discourse Analysis, and Grounded Theory. *Qualitative Health Research*, 17(10), 1372–1380. <https://doi.org/10.1177/1049732307307031>
- Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., de Vries, W., de Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M.,

- Ramanathan, V., Meyers, B., & Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, 347(6223).  
<https://doi.org/10.1126/science.1259855>
- Thøgersen, U. (2004). *Krop og fænomenologi: En introduktion til Maurice Merleau-Pontys filosofi*. Hans Reitzels Forlag.
- Tsing, A. L. (2015). The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins. In *The Mushroom at the End of the World*. Princeton University Press.  
<https://doi.org/10.1515/9781400873548>
- Vild med Vilje. (n.d.). *Vild Med Vilje*. Vild Med Vilje. Retrieved 27 April 2022, from  
<https://www.vildmedvilje.dk/>
- Washington, H. (2019). *A Sense of Wonder Towards Nature: Healing the Planet through Belonging*. Routledge. <https://doi.org/10.4324/9780429490910>
- Wiek, A., Withycombe, L., & Redman, C. L. (2011). Key competencies in sustainability: A reference framework for academic program development. *Sustainability Science*, 6(2), 203–218.  
<https://doi.org/10.1007/s11625-011-0132-6>
- Wood, D. (2001). What is Ecophenomenology? *Research in Phenomenology*, 31, 78–95.
- Worldometer. (n.d.). *Denmark Population (2022)*. Retrieved 28 February 2022, from  
<https://www.worldometers.info/world-population/denmark-population/>

## **9 Appendix**

### **9.1 Conversation guide**

All ten gardeners gave verbal consent to the inclusion of our conversation in the thesis and approved of the use of their first names.

#### **Garden biography:**

Can you describe your garden for me in words?

Ask about their definition of a wild garden.

Why does this way of gardening appeal to you?

What is your history with gardening? Was there a garden where you grew up?

#### **Interactions with garden:**

How do you feel when you spend time in your garden? Do you still spend time in the wild part of your garden?

What do you think about when you're in your garden?

Is there a particular part of your garden you prefer? Can you show me?

#### **Nature perception:**

Can you tell me something about what nature means to you?

Ask about human beings' position in nature. Has this understanding changed throughout your life?

#### **Species and insect-specific questions**

Ask about understanding of insects.

What kinds of insects visit your garden? Do they in any way guide your way of gardening?

Ask about experiences with insects in garden.

Feelings and thoughts about insects. Has this changed after you started growing your garden wild? Ask about childhood experiences with insects.