

*A Companion Object: Materialising a multispecies sensibility
through creative practice in an ecological crisis.*



Cover image: *Riband Wave (Idaea aversata)*, N19 roof 26 August, 07:40:29. Katherine Pogson 2016

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Abstract

How may multispecies fieldwork expand creative practice to promote a decentred human relationship with nature? A case-study using citizen-science moth recording in the UK.

This practice-based research develops concepts and methods for decentring the human in relationships with the natural world through creative practice. I use citizen-science fieldwork recording moth species as an entry point to think through ecological entanglements with other species. I then critically reflect on how this process may inform a creative practice rooted in craft. I contextualise the practice through a theoretical framework that synthesises understandings from feminist environmental philosophy (Plumwood, Haraway, Puig de la Bellacasa), post-anthropocentrism (Braidotti) and social science thinking on care (Tronto, Gilligan). From these relational ontologies I construct a conceptual and thematic framework for communicating a multispecies sensibility. Informed by multispecies ethnography (Kirksey and van Dooren, Kohn), I develop an autoethnographic methodology that presents relationships with the more-than-human as a series of ethical encounters, which becomes the basis for an expanded creative practice. Outputs include creative writing, moving image, collaboration and textile works.

Citizen-science provides a theoretical and methodological basis from which to extend craft and visual arts practice towards explicitly ecological forms of expression. Creative practice communicates those findings beyond the didactic confines of scientific scholarship through the presentation of alternative relational narratives. These in turn can magnify cultural discussions, unpick anthropocentric views and build ecological literacy. The aim is to re-engage human emotions in curiosity, sensitivity and empathetic connection with the more-than-human.

The thesis contributes concepts, methods and practices that untangle the intentions, form and content of craft-based practice to redirect what is materialised through the act of imagination. Decentring the human in ecologically-engaged creative practice also decentres object making as a primary goal, redirecting energies through an expanded practice that includes public engagement, activism and conservation work.

Keywords:

Anthropocene, Care, Citizen-science, Companionship, Creative practice, Ecological literacy, Moth, More-than-human, Multispecies sensibility, Nature, Post-anthropocentrism.

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Prologue

9pm Hornsey Rise.

Up the ladder to the roof.

The metal frame stretches up from my first-floor terrace onto a flat roof. I climb over the ledge, past the satellite dish, pulling my bag of cables, wooden slats and plastic jars behind me. The North London evening sky is overcast, with the orange glow of sodium lights and intermittent glimpses of moon.

In the act of stepping out onto this platform, I enter a different world. I can see into kitchens and living spaces crowded together, remnants of a garden, the backyard of the pizza shop. Immediately I feel the wind, the elevation of the hill, and sense the cardinal points – sunset and sunrise – in a way that I am woefully unable to do at ground level.

Unreeling the electric cable, I cast it off, lowering it through a skylight to a plug in the bedroom below. A simple plywood box, with two angled sheets of Perspex over the top. The cable attaches to a fluorescent actinic bulb, which gives off an ultra violet glow and should not be looked at directly in case of retinal damage.

Feeling slightly ludicrous in my night-time sunglasses, I wait for the first wave of insects, the dusk flyers.

And here they come. Their eyes shine copper in the torch light. You feel rather than see their approach, in a whirring set of wing beats, a percussive sensation on the ears, the skin.

Fragility is not the impression you receive surrounded by dense, circling bodies as the evening deepens. It is more a sense of urgency, of force of intent – as the moths home in, repeatedly diving towards the light.

– Katherine Pogson, 'Towards... Something More Liveable,' A Moth Journey.
in Fletcher, Kate, St Pierre, Louise and Tham, Mathilda, eds. *Design and nature: A Partnership*. Routledge (2019), pp.26-28.

On the Roof



Fig. 0.1: *Dawn panorama, N19 roof 12 August, 05.55.00.* Katherine Pogson 2020

In 2015 I began to record native moth species on my roof in North London. Climbing a ladder from a small terrace to the flat roof above, at dawn and dusk I would commune with rarely glimpsed creatures in an act of summoning that made me feel both guilty and enthralled. “Fishing in the night sky”, I called it. The urge to do this was partly ‘biophilia’, a desire to experience closer interaction with beings beyond the human in my daily life,¹ and partly about working through a juncture in my creative practice.

I had spent months staring at a book of photographs of living moths, rather than the usual pinned specimens (Manley 2008), to the perplexity of my partner. “Are you *still* looking at that book?” An artist with a background in craft, I could not immediately explain the compulsion. More than a designer’s eye for pattern and texture, it was a question about how to respond creatively to this overload of visual, sensory and ecological cues: what to do with this information?

My partner, the giver of the light trap, is an expert in urban trees who grew up on the chalk Downs and has a capacious self-taught knowledge of native plants, botanical classification, and their relationships to geography. But I was a suburban child, with one East End-born parent and half the family from the Indian subcontinent, dislocated from their native turf. I remember once in the garden watching in horror as my grandfather chopped a slow worm into wriggling chunks with his hoe – a reflex reaction to what he thought was a venomous krait.² My

¹ This concept was coined by E. O. Wilson in 1984.

² *Bungarus caeruleus*, a highly venomous Indian snake.

understanding of ecology was limited to tree-climbing in the local park and watching garden birds from my bedroom window. On botanical expeditions throughout the United Kingdom, my partner introduced me to a greater understanding of plants and their contexts, and I began to notice the insects.

Living in one of the most densely populated boroughs in London, with no garden, light-trapping for moths on the roof became an entry point to my neighbourhood ecology.³ In the hours when human activity is less dominant I came to feel more-than-human entanglements more clearly. I began to see how some of the moths I encountered were linked to the trees on the nearby railway embankment, while others only arrived at certain times of year, when winds blew from the continent. I felt challenged to deepen my understanding of urban nature in this time of environmental degradation, and to orient my creative practice in relation to that understanding. Before I continue, I need to explain a professional juncture which occurred at this time.

³ Islington was the most densely populated London borough in the 2011 Census, overtaken by Tower Hamlets in the census of 2021. Office for National Statistics www.ons.gov.uk

A Companion Object



Fig. 0.2: Gourd vessel for gunpowder, with drum-shaped shot-holder, Nigeria. Courtesy of The Pitt Rivers Museum, Oxford. 1914.26.98.1 Photo: Katherine Pogson 2015

Journal entry, 28th October 2015

In a museum store-room, boxes are unpacked and objects from the other side of the world are removed. Strange, shapely, contrasting objects in pairs, each joined together with cord. They are vessels for killing and healing, for gunshot and powder, or medicine. I should be thinking about materials and construction, process and form. But I can't stop thinking about moths.

A subliminal tension between these accusing objects, my growing interest in Lepidoptera, and a turning point in my professional life is leading me far away from the things that used to ground me – habit, procedure, expertise. I am entering a painful process of unlearning.

In 2014 I was an established designer-maker, working with leather as a primary material. I set up a studio in Central London in 2000, making artefacts for fashion and interior design companies and individuals.⁴ We produced sculptural objects, accessories and surface treatments to commission, mostly in vegetable-tanned leather, using labour-intensive craft processes. While practising studio craft in a capital city is perhaps a privilege, it is also a marginal existence, carving out a niche on the edges of the creative industries.



Fig. 0.3: *Acanthus clutch*. Vegetable-tanned leather, suede, linen. 15 x 20 x 8cm. Katherine Pogson 2011

While the autonomy suited me well for over a decade, my business had become reactive rather than creative. A growing mismatch between my personal motivations and the expectations of established clients led me to wind up my commercial practice, to rethink my creative intentions and the means of communicating them. I wrote a doctoral research proposal, seeking to uncover the

⁴ At Cockpit Arts, Holborn, 2000–2012, and Livingstone Studios, Hampstead, 2014–2018.

coded ways in which ‘craft as resistance’ (Bryan-Wilson 2013) motivates urban craftspeople, and is enacted through business and ethical choices.

In April 2015 I undertook a short residency at the Pitt Rivers Museum in Oxford. The *NeedMakeUse* programme selected practitioners to shed light on the use of particular materials in the Collection from a maker’s point of view. Knowledge gained through brief archival access and subsequent material experimentation was shared in public making workshops, a spotlight talk, and an exhibition of work-in-progress at the Museum (September 2015–January 2016). The Pitt Rivers ethnographic collection, grouping objects by type rather than origin, has long been viewed as an iconic design resource. But, as the Museum recognises, its origins are rooted in controversial high-Victorian ideas of anthropology, which promoted a racist, universalising perspective of human evolution from ‘savage’ to ‘developed’. The imperialist lens through which artefacts collected in colonial times were habitually interpreted is increasingly contested (Hicks 2020). Isaac Julien’s film installation ‘*Once Again... (Statues Never Die)*’ (2022) exemplifies this, with a scene set in the Pitt Rivers Museum, questioning both the means of acquisition and the rationale behind such displays.⁵

As a specialist in leather moulding techniques, I was drawn to a series of decorative paired vessels from Sudan, Tunisia and West Africa (figures 0.2, 0.4). Physically tied together, each pair displayed marked differences in material, shape, construction and scale between objects nevertheless linked through function. The gunpowder, shot and medicine flasks, in stark contrast with my own design tradition, posed questions about connections between materials and place, global influence and indigenous ways of seeing. The smaller vessels set up a particular tension in relation to the larger, suggesting a power struggle both playful and provocative – an image of mute accusation between the hunted and the hunter, perhaps.

⁵ The Museum is highly aware of this contested basis for its existence and is actively involved in returning objects and presenting multiple interpretations of its collections.



Fig. 0.4: *Moulded leather gunpowder flask with lead shot pouch, Tunisia*. Courtesy of The Pitt Rivers Museum, Oxford 1900.3.9 Photo: Katherine Pogson 2015

Material culture analysis in the context of the decolonising museum is not the focus of this research, however. The residency was a discrete project that informed my later research in a profound but tangential way. Curiosity about the dynamic between these contrasting objects became entangled with my growing interest in the study of moths and began to play out subliminally in my making practice.⁶ The paired objects suggested a material probe that could be harnessed to imagine dialogues between radically different modes of being. I coined the phrase ‘companion object’ to characterise this resonance between contrasting modalities, and began to use the concept to interrogate ideas about relationships with nature.

⁶ This is described in ‘Towards... *Something More Liveable*’ A Moth Journey (Pogson in Fletcher, St. Pierre and Tham 2019) in Appendix C.

For the purposes of this research therefore, the companion object presents a pair of contrasting yet connected entities that together create a dialogue through material language. The image embodies a focus on human/nature relationships as a research theme, within the larger context of a question about the role of craft practice in an ecological crisis. As a critical starting point, the image presents a consciousness beyond the human that can be used to challenge subject-object relationships. The research that developed is not a design-based enquiry, but a multispecies autoethnography. It marks the end of a phase as a designer-maker, and builds the foundations of a new creative practice, confronting ethical dilemmas in relation to the ecological emergency, focusing on philosophy rather than materials, with questions about the purpose, form, and content of making at the heart of it.

Chapter One – Introduction



Fig. 1.1: *Stop Fucking this Up*, Global Climate Strike march, London 20 September.

Katherine Pogson 2019

By positioning human/nature relations beyond Modernist dichotomies underpinning scientific discourse, the implications of the Anthropocene shift from methodological to the ontological, dislodging sustainability from its traditional scientific foundations.

– David Maggs and John Robinson, "Recalibrating the Anthropocene: Sustainability in an imaginary world", *Environmental Philosophy* 13, no. 2 (2016), 175.

This thesis examines human relationships with 'nature' to assess the role of creative practice in promoting a multispecies sensibility. In light of the current

environmental crisis, I propose greater ecological literacy among those living under capitalism is required to rethink our place within nature. More than an understanding of biology alone, ecological literacy helps to develop a multispecies sensibility. **A multispecies sensibility** combines curiosity about the more-than-human with lived experience in an ethical approach that is a powerful motor for behaviour change. The term 'more-than-human' derives from human geography and conveys the range of phenomena that exist beyond human control while drawing attention to human dependence on these forces (Rogers et al.2013). I argue that a multispecies sensibility can be encouraged by practices that decentre the human within constructs of nature, to dissolve the binary thinking that perpetuates instrumental attitudes to biodiversity. Inhabiting a more porous sense of being alive, humans may experience actions that damage ecological communities as a form of self-harm. Could this dissolve the cognitive rift that seems to paralyse privileged nations from *feeling* sufficiently the negative effects of human actions, which we so efficiently document?

Citizen-science fieldwork is one way of building towards this goal. I make a critical analysis of my durational practice of moth-recording to expand the remit of citizen-science through an arts-based approach. There is a gap in knowledge between professional science and public understanding, and between the communication methods employed by art and science. Beyond data-harvesting alone, such activities strengthen the agency of the amateur ecologist through close encounters with wildlife, linking back to the very origins of natural history.

Creative practice can communicate narratives that re-engage human emotions, curiosity and sensitivity with more-than-human concerns, helping to invert anthropocentric views and activate care. Expanding the boundaries of art and science to rethink what is considered valid 'data' recognises a much richer range of experiences. I contextualise my practice through a theoretical framework that draws on feminist environmental philosophy and writings on care. **Multispecies ethnography**, a recent development in anthropology, provides a conceptual and practical means to apply these concepts to creative practice. **The thesis contributes a multispecies autoethnographic method that extends the remit of a craft-based approach beyond a materials and studio focus.** The expanded practice presented is a contribution in its own right, communicating stories of charged interspecies

encounters that foreground ethical dilemmas to challenge the idea of humans as central to the workings of nature, while highlighting responsibility for damage through power differentials.

1.1 Research Focus

This practice-based enquiry uses five years of citizen-science fieldwork to examine interspecies relationships in an urban setting, in the context of ecological breakdown. The research sits between environmental humanities and craft and art practice, addressing the University of the Arts London research theme Living with Environmental Change, which seeks to increase “understanding of environmental change, communicating the issues... to change... behaviours” (UAL 2019). My research draws on environmental philosophy, ecology and multispecies ethnography to develop a theoretical framework that forms the basis for an ecologically-engaged creative practice that decentres the human.

The research began at the time of the Paris Climate Accords in November 2015, where 196 parties committed for the first time to strategies to limit global warming to below 2°C above pre-Industrial levels.⁷ In the same year, the Stockholm Resilience Centre recognised that, of their proposed nine ‘planetary boundaries’ defining safe limits for sustainable living (Rockström et al. 2009), at least four had been breached and were in the zone of “high risk uncertainty” (Steffen et.al. 2015).⁸ Reassessments in 2022 concluded that only a third of Earth’s planetary systems are still operating within safe limits (Wang-Erlandsson et al. 2022). In 2015, carbon dioxide warming the atmosphere had reached 400 parts per million, 144% above pre-industrial levels (WMO 2016). At the time of writing, it is 420 ppm; when you read this, it will be higher still.⁹

⁷ United Nations Framework Convention on Climate Change.

⁸ Biosphere integrity, climate change, land-system change and biochemical flows.

⁹ Reanalysis of atmospheric data in June 2024 shows the Earth to have been above the 1.5°C target for the whole of the previous year (Copernicus 2024).

The research is concerned with the second planetary boundary, loss of “biosphere integrity” including functional and genetic diversity (Steffen et al. 2015). Biodiversity loss provides a portal through which to examine instrumental attitudes to nature. Much environmental debate is framed in terms of threat to human livelihoods, but studies of biodiversity, notwithstanding complex patterns of migration and selective expansion (Boyes et al. 2019), document steep falls in abundance and variety through habitat loss, global heating, fluctuating weather patterns (van Bergen et al. 2020), light pollution (Carrington 2019) and pesticide use (RSPB 2019). In only fifty years, variety and abundance have plunged dramatically. The global Living Planet Index “shows an average 68%... fall in monitored populations of mammals, birds, amphibians, reptiles and fish between 1970 and 2016” (Almond et al. 2020, 6). Mainstream scientific evidence indicates that these impacts are anthropogenic, and symptomatic of the alienation between urban human culture and the rest of the living world. A focus on biodiversity therefore draws attention to the often-overlooked relationship between the scale and speed of change to environments (Mace et al. 2005), and the embedded ways in which human actions, thoughts and understandings are implicated in these harms.

However, framing the subject in terms of statistics perpetuates the dichotomy between climate science policy and cultural behaviour. Maggs and Robinson describe the separation of facts and values as an imaginative failure that perpetuates the myth of instrumental solutions and avoids the fundamental ontological challenge (2016, 189). For decades, environmental concerns have been the focus of scientific research (Carson 1962), political lobbying (Greenpeace), and artistic initiatives (Cape Farewell). Sustainable development goals are now ubiquitous (Figueres et al. 2017), and since the 2018 IPCC report outlined a ten-year timeframe for significant action to avoid irreversible climate change through human-triggered global warming of 1.5°C (IPCC 2018) public understanding has grown. The phenomenal impact of Greta Thunberg’s school strikes begun in 2018 heightened global awareness of the timeframe for addressing environmental damage, prompting numerous organisations to declare ‘climate emergency’. Extinction Rebellion (since 2018) have harnessed the expression of messy, unprocessed grief as a mechanism for dismantling paralysis. The new wave of activism was characterised by a flat structure and People’s Assemblies, enacting an

alternative to hierarchical organisation that reflects a decentred human stance. The crisis requires a reintroduction of subjectivity that the humanities are well placed to provide.

The environmental humanities are themselves interdisciplinary; combining philosophical thought with anthropology, geography, literature, and the history of science (Braidotti 2013). The intersection of scholarly disciplines facilitates environmental knowledge production that foregrounds political, social, and cultural considerations to break down the barriers that have traditionally separated the arts and sciences (Emmett and Nye 2017). I connect feminist environmental philosophy from Haraway (2010, 2015) and Plumwood (2002), with thinking on care by Tronto (1993) and Puig de la Bellacasa (2017). Developments in anthropology from Ingold (2000) and Tsing (2016) lay the groundwork to extend its concerns beyond the human realm, through practical multispecies fieldwork (Kohn 2013, Rose 2013). Critical reflection on these theories and methods provides the basis for exploring their expressive potential through craft-based creative practice.

An environmentally informed epistemology challenges the craft-based practitioner to move beyond material and aesthetic concerns, and develop a more robust critical approach. Although making things is central to human expression – our survival depends on the “universal metabolism of nature” (turning raw materials into life-supporting products) – the ecological crisis presents fundamental questions about the purpose and interpretation of artistic objects produced within the ideologies of a capitalist economy (Saito 2022, 19). Cultural artefacts that hope to speak of alternative value systems become commodities within the systems they critique. Yet creative practice can challenge fundamental theories of value at a societal level. It can be argued that flawed theories of value perpetuate inequality and environmental degradation. Indy Johar of Dark Matter Labs calls these “deep code errors” perpetuated by systems of governance for example, which exist at a population, rather than individual, level.¹⁰ Therefore the challenge is to develop novel ways to materialise cultural values through critical reflection on existing creative practices. For me, this meant a willingness to relinquish all expectations of material outcomes in order to be truly present to what emerged from the fieldwork.

¹⁰ Johar, Indy. ‘What’s the value in and of creative practice?’ Social Design Institute live event, UAL, December 14 2021.

1.1.1 Research question, aims and objectives

A changed sense of responsibility towards the living biosphere requires novel cultural approaches, which the arts are well-placed to articulate. My key research question asks: *How may multispecies fieldwork expand creative practice to promote a decentred human relationship with nature?*

The first aim scopes out alternative practices of thinking and relating to the ecologies in which we are embedded, to strengthen sustainable coexistence with the more-than-human. The second aim critically evaluates the work of other practitioners in this area. The theoretical approach is tested using citizen-science moth-recording fieldwork as an entry point to develop ecological understanding of my local environment (Objective One). My second objective reflects on these experiences to find openings to new ways of creative expression. Multispecies ethnography is defined below in section 1.2.3 and evaluated in Chapter Three.

Aims:

1. To develop a theoretical approach to decentring the human within human/nature relationships to guide the practice, drawing on concepts from post-anthropocentrism, feminist environmental philosophies of care and multispecies ethnography; and
2. To critique treatments of human/nature relationships by creative practitioners in the ecological emergency, to assess useful approaches to decentring the human.

Objectives:

1. To critically evaluate citizen-science moth-recording fieldwork as a research method to inform a decentred human approach to creative practice; and
2. To identify narratives, themes and forms emerging from the research to develop in creative practice, and to reflect on their potential to promote a multispecies sensibility.

1.1.2 Thesis argument

I argue that creative practice can contribute to decentring the human in relationships with nature within urban capitalist cultures by fostering empathy, responsibility and an expanded sense of the self in relationship with the more-than-human. A relational ontology can be developed through immersive experience over time in interspecies entanglements. Such practice promotes ecological literacy, develops sensitivity and highlights power relationships between humans and others that bring ethical responsibility to the fore. Reflecting on these experiences transforms the intention, form and subject matter of creative practice. Durational engagement in environmental citizen-science activities provides narratives that can invert anthropocentric views, unpick habitual interpretations (such as seeing insects solely as pests) and give rise to alternative creative expressions. These in turn can magnify cultural discussions that contest received concepts of anthropocentrism.

1.1.3 Position statement



Fig. 1.2: *Moth-recording, N19 roof, 28 August 07:30:53.* Katherine Pogson 2017

The UK supports 70,000 living species of animals, plants, fungi and single-celled organisms, and as many wildlife recording volunteers.¹¹ I represent one of the species and am one of those volunteers. As a human, I acknowledge that the biosphere has been highly shaped by the specific political and economic system of capitalism. I recognise how capitalism constructs concepts of nature and informs, limits and directs opportunities for engaging with it.

As a wildlife volunteer, I understand that ‘nature’ can no longer be considered a stable background support system. Cultural inequalities, exploitations and profit values, and their intimate relationship to social and racial injustice, are deeply implicated in this destabilisation (Kapoor et al. 2022). While the concept of valuing biodiversity for its own sake needs to be examined in relation to specific circumstances, I believe that urban humans can benefit by developing more widespread ecological literacy in relation to our environments.

As an artist, I believe that creative practice can suggest imaginative and critical ways to expand ecological awareness. I began this research at a professional crossroads to realign creative intentions with environmental realities. My research examines how relational thinking develops through personal interactions with the more-than-human. My background in craft informs my research through a learn-by-doing approach, and a socio-political stance that values autonomy and seeks ways to live in a position of resistance to consumerism.

An urban female artist of mixed heritage living in post-industrial London, I recognise that the colonialism and imperialism that accelerated the exploitation of nature originated at scale in the Global North, which largely continues to distance itself from fully responding to the consequences. These histories run through my blood, tracing both the catastrophes and opportunities that shift (not only human) populations across the globe, creating fractured relations with place and home. The legacy of these forces, reflected in alienated ways of life in big cities such as London, is my concern. By offshoring labour, waste and profit, we reinforce a cognitive separation from both our sources of sustenance and their consequences

¹¹ “The Royal Society for the Protection of Birds (RSPB) State of Nature Report 2019 found that there were 18,700 volunteers contributing to structured monitoring schemes. An additional 70,000 volunteers also submit biological records to National Recording Schemes or Local Environmental Records Centres” (Collins 2021).

(Tsing 2016).¹² Extending concepts of restoration and equality to the more-than-human may repair that divide. It is important not to universalise ‘the human’ when discussing multispecies engagement, to recognise that many communities and cultures are intimately connected within their environments, do not share extractionist world views, and are disproportionately affected by the injustices created. My focus is on how a multispecies sensibility might promote ecological literacy in the urban context in which I live.

While an arts education places limits on my scientific knowledge, it provides the apparatus to reimagine the interpretation of environmental data to expand cultural conversations towards change. The nature/culture division that informs this research relates in part to the historical development of biological sciences in the Anglo-European tradition, which place humans firmly at the centre of a hierarchical view of the natural world. By extending the conceptual apparatus of citizen-science moth recording to validate sensory, emotional, self-reflective qualities and ethical responses, I delineate a creative practice concerned with rebuilding relational connections with more-than-humans in shared urban spaces.

I want to acknowledge that, having deferred for a year, I undertook this unfunded research part-time while helping to care for my mother, who was diagnosed with macular degeneration and Parkinson’s disease in 2014. The ongoing context of care impacted my approach to more-than-human research deeply. The contrast between direct experience of hands-on caring and reflection on planetary care (where the situation may not be terminal) highlights questions about hope, control and change over time. The intention is not to understand humans better, but to examine the complex ethical relationships revealed.

¹² “Alienation produces the environmental dilemmas we call Anthropocene” (Tsing 2016, 4).

1.2 Key perspectives and terminology

One of the ideas inhibiting genuinely ecological politics, ethics, philosophy, and art is the idea of nature itself.

– Timothy Morton, *Ecology Without Nature: Rethinking Environmental Aesthetics*. (Harvard University Press, 2009: 14)

The environmental crisis requires a fundamental reframing of human relationships within an ecological cultural framework. Formal recognition in geological terms has been sought to define the period from 1952 onwards as a new geological epoch, the **Anthropocene**, characterised by irreversible impacts of human activity, detectable at every level of the Earth from the sea floor to the upper atmosphere (Crutzen and Stoermer 2000). Despite rejection by the Subcommittee on Quaternary Stratigraphy, the term has been taken up in the environmental humanities and wider cultural commentary in debates which reframe the human condition in light of this knowledge (see 2.4). Anthropocene understanding demands a paradoxical response: both heightened ethical responsibility for human impacts on planetary life-forms and systems, and a recognition of forces beyond human control that displace our species' sense of being at the apex of a global hierarchy (Plumwood 2002).

I use the term **creative practice** to denote an expansion of craft practice that converges with fine art through developing theory and disciplinary boundaries, beyond the object or material focus. It is not intended to cover all forms of creative output or industry.

Moths are scale-winged insects of the order Lepidoptera. Over 2500 species are found in the UK, commonly divided into two groups, macro (large) 800 species in nineteen families, and micro (small), over 1500 species in fifty families.

Nature is a vague and contested term, which, in common use in relation to ecology, could be defined as “everything that is not human”. The idea of ‘nature’ as separate from humans is a cultural construct, untenable in an age where human impacts are global and omnipresent (Steffen et al. 2015). As Timothy Morton points out in the quotation above, it is unhelpful for breaking down the cultural divide that informs

this research. At the same time as the human/nature divide is being questioned, many species require space free from human interference in order to survive (Wilson 2016). Lorimer (2015) prefers to use ‘wildlife’ rather than ‘nature’, to indicate that which is beyond the direct control of humans. While recognising the usefulness of Donna Haraway’s term ‘natureculture’ (2003) in foregrounding the entanglement of the two contexts, I have chosen to continue to use ‘nature’ as a recognisable shorthand when referring to prevailing anthropocentric attitudes. Culture implies a shared context (Mathews 2006) that is missing from this view of nature as separate. Otherwise, I refer to **ecological assemblages** to indicate multilayered living interconnections that include humans.

David Abram coined the phrase ‘**more-than-human**’ in 1996 to describe the place of humans as nested within a lively earth-bound existence “*that necessarily exceeds all our knowing*” (2024, 347). Humans are a “subset” within something larger. Finding that the words ‘nature’ and ‘environment’ distance and separate humans from other living entities, Abram’s “*more-than*” draws attention to the quality, autonomous power and magnitude of this overarching cosmos. In discussing human relationships within ecological assemblages, I use the term **more-than-human** to acknowledge the existence of ways of being that encompass differences, and to remind myself of the decentring aims of this research. Further key terms are defined in the Glossary in Appendix A.

1.2.1 Decentring the human

Decentring the human is a broad term used to challenge nature/culture binaries and anthropocentric views. Arguments for decentring cover a range of interests, including consideration of the ‘less-than-human’ to underline the oppressions of capitalism (Büscher 2022), but tend to draw attention to the agency of creatures, material and systems beyond the human to dissolve some of the cognitive boundaries that have historically separated the human species from these entanglements. Decentring the human in relationship with this construct of nature requires developing ecological understanding. Deep ecologist Arne Naess coined the term ‘the ecological self’ to describe a human sense of being which moves beyond ego to find identity as part of a community of living beings (1995, discussed more fully in Section 2.3). I use ‘multispecies sensibility’ to suggest an expanded

awareness of the human-in-relationship with the more-than-human, avoiding a return to 'self'. Attitudes to nature as background mechanisms functioning to support human society reinforce behaviours that degrade habitats, and have unpredictable consequences for all living things. Design thinker John Thackara (2015, 10) refers to this divide within industrial societies as 'cognitive blindness', drawing on Foster's (1999) reading of the concept of 'metabolic rift' from Marx. Feminist Val Plumwood describes the "Illusion of Disembeddedness" as a form of denial that promotes a false sense that humans can live without ecological restraints (2002, 97). To decentre the human does not minimise human inequalities and injustices, but recognises that attitudes to, and treatment of, ecological assemblages intimately reflect the causes and paradigms that create injustice and degraded environments for human and non-human alike.

The roots of this crisis are traced in part to the scientific traditions of Western thought wherein biological classifications have created hierarchies of species, and the scientific method encourages a separation of the observer from the observed. On the other hand, ecologists argue that taxonomy, the naming of species, allows us to understand evolution, and is vital for conservation (Robert 2024). The development of natural history is discussed in section 2.2. However, a focus on impacts can perpetuate the divide between human and environment, instrumentalising the perceptual gap itself as a problem to be solved through technical action. This enquiry is more interested in a relational ontology, targeting habits of thought that reinforce human exceptionalism. The process seeks ways to practise recalibrating human relationships with the more-than-human, towards more integrated ways of thinking and being.

Creative practice can materialise other values by developing work that highlights more-than-human lives on their own terms (practitioners are reviewed in Chapter Four). In a lecture on *The Creator Economy*, technological forecaster Paul Saffo outlined his view of economic evolution as a succession of scarcities. The Industrial Revolution arose due to a scarcity of 'stuff', leading to consumerism – a scarcity of 'desire', followed by the current creative or attention economy centred on a scarcity of 'meaning' (Saffo 2015). The 'economy of meaning' phase arises because desire has been misplaced. An economy of meaning requires a culture of meaning, and so the role of environmentally informed creative practice becomes clear: to critically

address the consumer model of desire in order to access alternative levels of meaning. Engaging with Naess's concept of 'the ecological self' as a sensitising practice can develop a multispecies sensibility, and transform thought-patterns through extended immersive attention to more-than-human *umwelts* or 'life-worlds' (Uexküll, transl. O'Neil 2010). Reflective and imaginative arts approaches have been shown to promote action on environmental issues by engendering psychological feelings and emotions in audiences (Roosen et al. 2018) – practitioners who exemplify this are discussed in 4.2. I argue that the direct sensory experience of a multispecies fieldwork method can focus the expression of creative practice to communicate this sensibility more widely. Methods are discussed in detail in Chapter Five.

1.2.2 Post-anthropocentrism

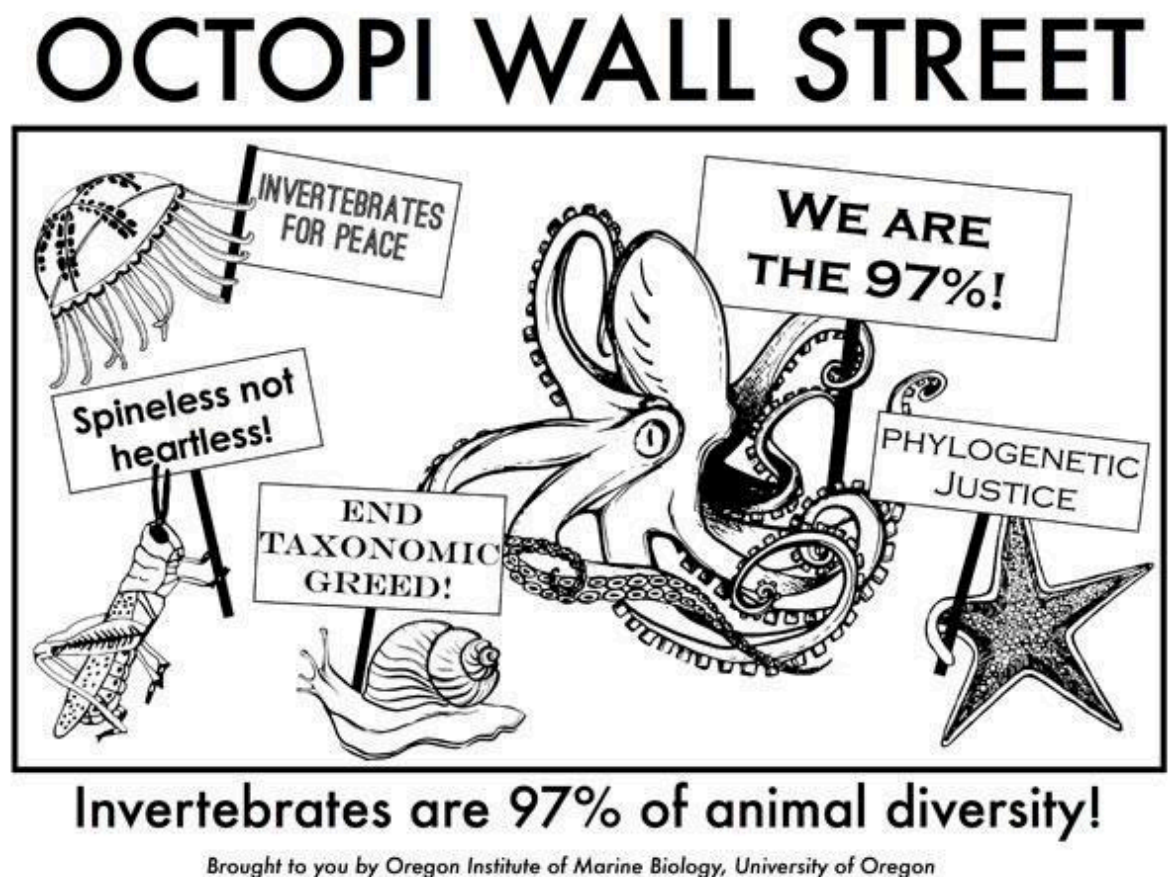


Fig. 1.3: *Octopi Wall Street*. Laurel Hiebert, Kira Treibergs and Marley Jarvis. Deep Sea News November 2011

The concept of decentring the human in relationship with nature arises from philosophical posthumanism. Posthumanism is a contested term (Herbrechter in Braidotti and Hlavajova 2018), which seeks to redefine humanity in relation to technological development, and biological and environmental relationships. Many strands of ecological philosophy, drawing in physics, feminism and technology studies, explore different posthuman configurations. If humanism's project is the perfectibility of man, posthumanism provides a broad framework for exploring how human beings are entangled with the "nonhuman" (Wolfe in Lennard 2017).¹³

Humanism is rooted in classical philosophies of virtue that use logic and reason to transcend social limitations and develop democracy, freedom, dignity and human rights (Levinas 2003). In the twentieth century, this included a response to the horrors of world wars and the Holocaust, and a commitment to values of ethical international development and global citizenship, based on a vision of equality and democracy (Wintermute 2019). While humanist goals of equality and justice have merit and are far from being reached, their human-centred approach can be seen as perpetuating some of the thinking that has contributed to the environmental crisis. Technical posthumanism focuses on extensions of the human experience beyond the limitations of body and material through human ingenuity, from our entanglement with media to bodily modifications. For posthumanist Cary Wolfe (2009), this raises ethical questions, to be addressed by embracing the 'animal' and material origins of 'technological man', rather than attempting to transcend them.

Feminist posthumanism, more correctly post-anthropocentrism, criticises the Cartesian and binary oppositions that have characterised human society since the Enlightenment, with specific relation to gender distinctions (Braidotti 2002). Feminist posthumanist Braidotti asserts that post-anthropocentrism opens an "ontological gap... [where] other species come galloping in" (2013, 51). This creates an ethical challenge to the decentred human subject, who seeks to both shrink into the background from a sense of overwhelming culpability for environmental destruction, and to promote the more-than-human to a joint status with humans.

¹³ The term 'nonhuman' customarily includes both 'nature' as described above and the technosphere.

The attribution of certain traits previously seen as anthropocentric (such as agency or power) can be read as an attempt to minimise human guilt for ecological impact on other species. Braidotti's flattened hierarchies do not absolve responsibility for the structural damage done to planetary boundaries by exploitation, but rather draw attention to the power imbalance within these encounters. Her concept of a 'nomad' ethics argues for subjective, non-universalising responses to complex issues of recognition and representation of minorities, including more-than-human ones (Braidotti 2006). The ethics of encounters between human and other species therefore becomes a central focus for this enquiry.

Feminist biologist and professor of the history of consciousness Donna Haraway rejects existing posthuman configurations, preferring to conjure visions of interspecies mingling, and talk of 'com-post' (2016, 11). Her gleeful play on words emphasises the finite, untranscendable materiality of individual biological life, and the fertilisation of new communities by decayed bodies in the future. In *A Cyborg Manifesto* (1984) she reinterprets cybernetics, using it as a metaphor to deconstruct social and gender divisions. Drawing parallels with animal ethics and artificial intelligence extends questions of equality and justice beyond the human. If humans are already merged with technology, our identities are clearly constructed, multiple and mutable. Recognising this opens a route to more equitable relations between different ways of living and being, redefining human boundary constructs. Braidotti (2013) further questions the limited anthropocentrism that privileges technical progress, but also only certain humans, at the expense of less-privileged humans and other life-forms, arguing that these commitments echo the patriarchal and imperialist projects of exploitation of the eighteenth and nineteenth centuries. Rather than embracing enmeshment with technologies, she proposes extending the notion of rights to those beyond the human to promote "bio-centred egalitarianism" (Braidotti and Hlavajova 2018, 1).

Environmental posthumanism is therefore critical of the assumptions of human primacy that drive contemporary notions of a successful life, and questions ethical positions that exploit the more-than-human for human gain (Karkulehto et al. 2019). This view seeks to highlight the agency of the more-than-human, as well as their independence from human activity (Schatzki 2001). Criticised, at its extreme,

for advocating a nihilist approach that encompasses the abolition of the human species (MacCormack 2016), environmental posthumanism, or more accurately, “anthropo-de-centering” (Rogowska-Stangret 2019, 829), in fact seeks to displace humans from a hierarchical apex within ecologies. To do so moves from extractive to mutually reinforcing relationships with more-than-human species, materials and forces. Reimagining practices of co-existing within planetary limits requires decentring human “privilege” (Plumwood 2002, 236) through more ethical relationships with nature.

1.2.3 Multispecies sensibility

Growing out of the recently defined cross-disciplinary area of environmental humanities, multispecies ethnography is a branch of posthumanism developed by anthropologists Kirksey and Helmreich since 2010 that extends ethnography “beyond the solely human realm” (Locke and Muenster 2015, 1). Such practices reconsider humans within their conceptions of nature, building on ecofeminist concepts of relationality. Relationality recognises the interconnections between phenomena as a range of vital understandings. The concept of intra-action describes how physical and living entities are ‘co-constituted’, coming into being through and within a constant process of interrelation with materiality and each other (Barad 2003). Haraway terms this ‘sympoiesis’, summed up as “beings do not pre-exist their relatings” (2003, 6). New materialist Jane Bennett (2010) extends the concept to include the energy flows of organic and non-organic materials, forces and systems (such as technologies, weather and scents), positioned as ‘vital materialities’ with their own power. If life is understood as a series of material experiences between mutually constituting entities, every encounter becomes an ethical one. Encounters matter because they produce ongoing ripples of influence which require awareness, thought and care. A multispecies sensibility, appreciating more-than-human assemblages and their requirements for flourishing, can therefore arise from a decentred human position in relation to the environment.

I define multispecies sensibility, the aim of this research, as an expanded awareness of human situatedness within dynamic assemblages of living and organic entities and forces. A multispecies sensibility recognises, and is curious about, the complex web of relationships beyond human agency that both maintain

and drive change within environments. In particular, this approach seeks to include the contributions of overlooked biota, such as insects, into wider cultural conversations (Kirksey and Helmreich 2010). It recognises that humans are not central to the workings of these assemblages, and remains alive to the independent agency of the more-than-human. Agency is a relationship, not a possession.

A multispecies lens unites a focus on biodiversity and conservation in this practice-based research with an engagement with posthuman and ecofeminist theoretical concepts of relationality and care. Creative enquiries in this arena need to be grounded in sensitivity to specific place, history and culture. Biodiversity and conservation are terms that embed contested anthropocentric values of hierarchy and control, and we do not yet live in a posthuman world. Recognising these points, my position is that it is an ethical responsibility to limit the damage done to wildlife while it yet exists. A multispecies sensibility values ecological literacy and empathy with the more-than-human as powerful ways through the challenges of the current ecological emergency, and as a tool for accelerating a cultural paradigm change within urban and developed societies towards relational ontologies.

In summary, the environmental emergency is anthropogenic, and its causes are in part based on a limited and flawed understanding of the ecological interactions that constitute life on Earth. For urban humans to recalibrate our conceptions of ourselves as ecological beings within these more-than-human life-worlds requires developing a place-based ecological literacy. Creative arts practice can delineate ways to unlearn destructive habits and assumptions, restore feeling and sensitivity to the interactions themselves, and rehearse, materialise and embed these recalibrations within the culture and lifeworld of the urban human.

1.3 Practice rationale

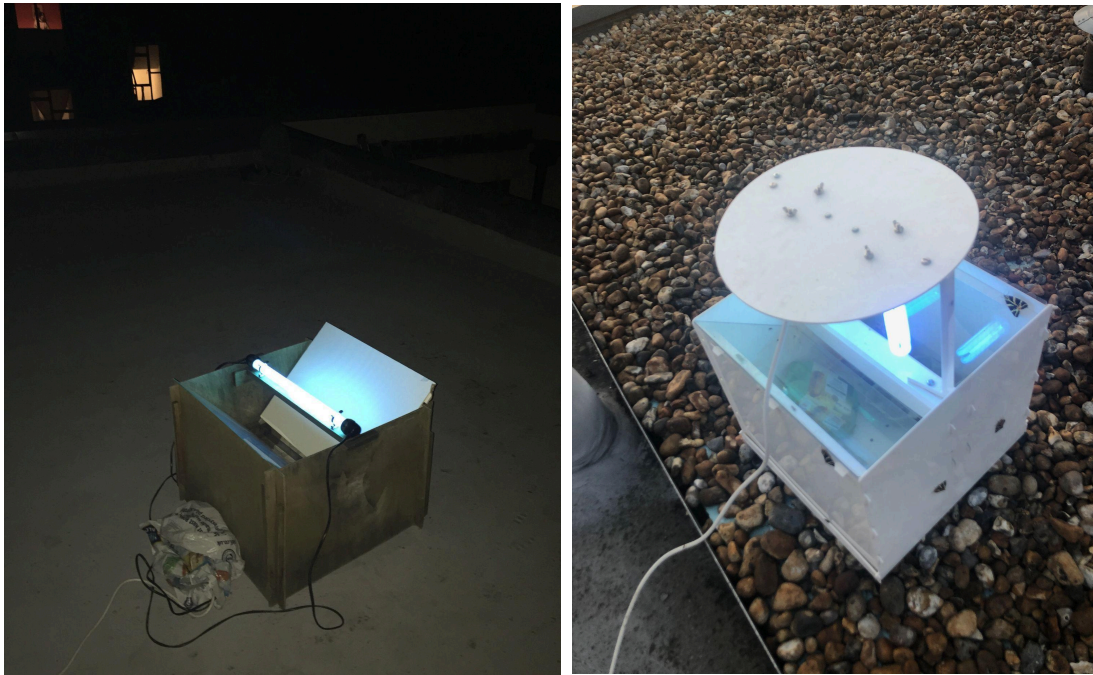
Through an approach rooted in craft making, but critical of the solutions-based approach of design, my research assesses the influence of multispecies fieldwork on the intentions and directions of my creative work, using critical reflection techniques of journaling drawn from autoethnography. Following Ingold, who characterises the products of thinking through making (both artefacts and

thoughts) as “the more or less ephemeral cast-offs of this process, strewn along the way”, the focus shifts from the artefact to the process of materialising knowledge through making (Institute for Northern Culture 2013, n.p.). The manipulation of materials by hand in craft practice, with its repetitive physicality, creates a rhythm for reflection. The critical process, however, involves a willingness to deprioritise making as an end in itself. The primary aim becomes the development of tools to enhance ecological literacy, which may redirect the creative urge into community engagement and conservation.

As the fieldwork of moth-trapping infiltrated my creative processes, I recognised its potential as a multispecies ethnographic method (Locke and Muenster 2015). Extending autoethnography to reflect on entanglements with the more-than-human became a means for rethinking both the subject matter and the expressive form of creative practice. Revisiting the encounters with moths through video, collaboration and creative writing, as well as material experimentation in the studio, the expanded practice develops ways to promote a multispecies sensibility through alternative interpretations of the meetings with wild creatures as layered memories that demand a personal, ethical response. Key philosophical themes developed in this work reflect on the value of difference. Recognising ethical responsibility within power differences prompts an extension of care and companionship to other species. While moth-recording on my roof developed my sensitivity to what was close by and shared, as a wilful intervention into the lives of unconsenting organisms to satisfy human curiosity, it is also a selfish act.

Reflecting on this dilemma gave rise to narratives of curiosity and care, as well as remorse or damage inflicted, discussed further in Chapter Six – Practice. The companion object image – of mute reproach between two objects, forever tied together, but operating in different modalities – also resonates with the concept of craft as resistance to mainstream commerce, discussed in section 4.3. The work maps out routes to empathy with the more-than-human by illuminating overlooked, misunderstood and disregarded aspects of environmental entanglement. The practice narrative therefore articulates how understandings synthesised from the fieldwork are reached through the creative process, bringing together the two disciplines of craft-based practice and environmental humanities.

1.3.1 The Light Trap Apparatus



Figs. 1.4 and 1.5: *Skinner light traps for moth recording*. Katherine Pogson 2018

Journal entry, 28th April 2016

Been on the roof again.

Light is the thread which joins. My image of the tied-together Companion Object links two different modes of being. But the meeting is not reciprocal. The mechanism which drags the moths out of the darkness is more lasso than invitation. Shelter is provided, but the function is for my own curiosity. The moths do not consent.

Light also separates. Daylight renders my subjects (most of them) docile and inert. Easy to photograph and handle, but also vulnerable – out of their element. So different from the frenzied urgency of the night-time encounters. In my downstairs bedroom, where the moth-light wire snakes in through the skylight, I wake hours earlier than usual, listening out for rain, for birds. And so, my responsibility for the light joins me to the moths again, teaching me slow and stumbling labours of contrition, of self-restraint, of care.

The Skinner light trap is a plywood box full of empty egg cartons, attached to a violet-spectrum light. Illuminated from dusk, the lure catches a representative portion of the passing moth population.¹⁴ Captured by the light the moths enter the box, where a Perspex funnel prevents them from escaping.¹⁵ They hide among the egg cartons overnight. This non-lethal apparatus is used to collect data for ecological monitoring purposes, enabling species to be identified, counted, photographed and carefully released away from predators the next day. Photography has supplanted the practice of collecting specimens to pin, and the urge to compile information for conservation has replaced the desire to kill and retain actual bodies. This activity is legitimised by the label of citizen-science, supplying information collected by the public for environmental research that informs conservation activities. Experience over time allows comparison between seasons and years, building ecological understanding.

In the UK, early industrialisation and the density of urbanisation has severely depleted ecosystems in relation to historic levels of biodiversity.¹⁶ City-dwellers live at a distance from the direct source of our food, water and power, and the lifecycles of more-than-human neighbours. Ecological literacy among urban populations can therefore be limited. At the same time, many people long to access wild places, cultivate gardens and interact with different species. Collated through the National Moth Recording Scheme, the data supplied by amateur moth enthusiasts on numbers of individuals and varieties of species found at a specific place and time provides a snapshot of the health of that specific environment. Together with long-running professional research such as the Rothamsted Insect Survey begun in 1964,¹⁷ such datasets provide insight into complex trends of distribution and

¹⁴ Not all moths respond to light; some can be summoned with the use of pheromone lures or sugar solutions, but I focus on light traps. Traps can also retain some beetles and other night-flying insects.

¹⁵ Recent research suggests that, rather than being attracted to light, evolutionary behaviour of ‘dorsal tilting’, angling their back to the light, causes circular motions in passing flying insects that trap them around artificial sources. Fabian et al. 2024 (6) write that “*dorsal tilting is sufficient to create the seemingly erratic flight paths of insects near lights and is the most plausible model for why flying insects gather at artificial lights.*” See *Species Stories* 6, p.336.

¹⁶ Fifty-one species of moths alone have become extinct since 1900 (Fox et al. 2021).

¹⁷ <https://insectsurvey.com>

density, not all of which are negative.¹⁸ Butterfly Conservation coordinates the information to produce detailed reports identifying patterns of ecological change. In 2019, this unparalleled resource was published as the *Atlas of Britain and Ireland's Larger Moths* (Randle et al. 2019), with the earliest entry dating from 1741. The publication facilitates the targeting of effective action to conserve habitats, but also raises broader public awareness of how ecological assemblages function. Amateur citizen-science thus contributes significantly to longitudinal surveys that illuminate patterns of distribution, movement, abundance and decline of wild populations. Species monitoring in turn offers access to a community of ecologists through the social structure of wildlife volunteering.¹⁹ Such communities encourage perspectives to be debated, enriching cultural exchange.

The light trap also functions as a companion object. In the in-between hours of dusk and dawn, it turns my flat roof into an arena for interspecies meetings, connecting me briefly with the moths through the mechanism of light. However, the space is not neutral and, in its liminal status, context becomes highlighted, bringing relationship dynamics into question. The moths and I are both out of our comfort zones. Our eyes respond differently to the stimulus: I use midnight sunglasses to avoid retinal burn; the moth's dark-adapted eye induces cortical overload as it falls into the trap; the rhodopsin that allows it to see taking several hours to recalibrate (Goldman et al. 1975, 397).

The apparatus therefore shines a light on the consequences of my actions, my culpability for any damage that might occur. I have stepped on moths inadvertently during the activity, and attracted wasps that prey on the trapped creatures. As the life of many adult moths is very brief in comparison to the human, I may have trapped them for a significant period, affecting their reproduction. The responsibility in turn interrupts my sleeping patterns, making me alert to downpours that might endanger my prisoners. Light-trapping implicates me in an act of will that is not reciprocal, recalling the accusatory tension that I projected onto the image of the paired museum artefacts. It raises ethical questions that

¹⁸ Data is available at: <https://insectsurvey.com/moth-data>

¹⁹ I volunteered at London Wildlife Trust, Woodberry Wetlands, and took part in 'bio blitz' data recording.

encompass motivations both of altruistic care (conservation) and of selfish curiosity, informing the direction creative practice might take. The problematics of care thus become a theme within the practice, raising its own questions about control that may paradoxically reinstate the human at the centre of the exercise. Ethical qualms based on situated experience provide a useful exercise for thinking through human-centric assumptions about our place in nature.

The apparatus calls into question the power structures of human society, including how scientific knowledge is constructed and communicated, and the complex interreliances within living assemblages, fostering a de-instrumentalization of the human view. For example, because moths mostly fly by night and are therefore largely unseen by humans, their value in terms of ‘ecosystem services’ (Ehrlich and Mooney 1983), such as in food chains and as pollinators, has been underestimated until recently (Walton et al. 2020).²⁰

Why moths?

Moths tell the story of evolution over long time periods, in relationship with particular places, conditions and other species (Jacobs and Bastian 2017). Moths move within a nexus of plants, minerals, predators such as wasps, bats and birds, and weather. Studies of Lepidoptera, the scale-winged insects, enrich an understanding of the shifting nature of geographical territories. Territories, for winged creatures, are defined by a range of factors including altitude – the vertical column of the air (Raffles 2011) – wind speed, and the availability of specific food plants. Ecological borders are defined by suitable habitats (available sustenance and tolerable temperatures) and conditions for reproduction, as for human populations. Human reliance on niche environments such as cities echoes these reliances. A shared vulnerability to rapid environmental change may help to build empathy to change attitudes. Moth populations fluctuate seasonally and some migrate across continents, but are also highly responsive to weather and temperature changes, and dependent on specific food plants and conditions for their survival. Narratives of co-dependency and adaptability through deep time are evidenced in their wide

²⁰ “[N]octurnal macro-moths that comprise extremely species-rich flower-visiting families have been largely neglected.... in agricultural landscapes, macro-moths can provide unique, highly complex pollen transport links, making them vital components of overall wild plant–pollinator networks” (Walton et al. 2020, n.p)

diversity and exploitation of specialist niches. Patterns of nourishment, procreation and freedom of movement (through practices of migration) provide insights that promote a more thoughtful vision of the resilience and sensitivity required for all species to flourish. Appreciating these themes prompted me to produce different types of creative practices including performance, events, collaboration and creative writing.

In British popular culture, moths are characterised as ephemeral, fragile and inconsequential, or associated with fear and darkness (Gandy 2016, 127). The fragility of moths does not lie in the delicacy of their body structure or short lifespan, however, but in their vulnerability to habitat loss, pollution and climate change, which disrupts fertility cycles. Humans are impacted by the same forces. Studying these forces can highlight the requirements for flourishing of different living entities, and how these are mutually constituted. Domestically, moths are characterised as a nuisance, feeding on prized knitwear. Yet of over 2,500 species native to the British Isles, only five micro-moth species live in close association with humans, two of which have larvae that ingest natural fibres.²¹ Eliding thousands of herbivores with one or two ‘pests’ ignores diversity. For the artist, using textile materials and processes to evoke the associations with care and repair embedded in domesticity and women’s labour provides an opportunity to invert and challenge inherited ideas about nuisance and damage.

Ecofeminist approaches to environmental concerns point out that, in patriarchy, women’s reproductive capacities have been equated with the essentialist regenerative capacities of the natural world, which ‘happen automatically’, thereby denying agency and choice (Plumwood 2004). This is accompanied by a quotidian humility, not drawing attention to itself, which nevertheless supports the existence of others. I draw parallels with the quiet remedial work carried out by insects within ecological assemblages, where ongoing maintenance is taken for granted. Through a reflexive arts-based strategy employing “metaphor, analogy and imagery” (Sullivan 2010, 65), this work draws attention to inequalities in relationships with the subjugated, extending the domestic metaphor to raise questions about planetary care and repair.

²¹ *Tineola bisselliella*, the common clothes moth, and *Tinea pellionella*, the case-bearing clothes moth.

As a sense-making activity therefore, the light trap encourages curiosity about more-than-human lifeworlds, promotes sensory attunement to environmental forces, their patterns and effects, and recalibrates received notions of human primacy, through an inversion of cultural ideas of insects as pests. This research promotes an agentic philosophy that recognises the generative force of the more-than-human, offering a portal towards understanding their subject position in terms of the requirements for flourishing. Together, these qualities position the light trap as a departure point to open up a discussion about ecological literacy in the light of species loss, and associated degradation of environments.

1.3.2 Contribution to knowledge

The **first contribution** to understanding in this research develops an alternative method for craftspeople using nature as a visual inspiration to develop a situated practice through fieldwork unattached to outcomes. The situated practitioner may focus on the ethics of interspecies encounters to inform an expanded practice beyond object-making. The **second contribution** is made through the practice outputs themselves, identifying narratives of **difference, nourishment, damage and care** that emerge from the fieldwork. The **third contribution** maps out fruitful territory for further research at the synthesis of feminist environmental philosophy and art and craft practice, by highlighting the value of the **citizen-scientist-artist** as an intermediary with the potential to make fruitful connections between disciplines that enhance the communicative potential of both ecology and creative practice to promote a multispecies sensibility.

1.4 Structure and scope of thesis

The thesis presents practice-based research that brings together the development of natural history and ecology, feminist environmental philosophy and present-day citizen-science field recording of moth species in the UK, using a multispecies autoethnographic method to influence the development of a craft-based environmentally-engaged creative practice.

1.4.1 Research boundaries

While this research grew out of my previous experience as a craft practitioner, my work with leather was not itself based on visual inspiration from nature (the clutch in figure 0.3 *Acanthus clutch* is an exception). My intention was not to carry out a detailed critique of studio-based craft, but rather to turn towards its intersection with fine art to assess how the different disciplines engage with theoretical and conceptual intentions, and make these more explicit in an ecological practice. The practitioner review therefore focuses mainly on artists who engage with multispecies viewpoints.

For this reason, I chose to review literature that might inform cultural attitudes, philosophies and debates that the practice might in turn influence, rather than review the design literature in which craft is usually placed.²² The material ramifications of human overconsumption are well-represented in other research streams, such as sustainability. A gap in understanding is evident in the solutions-based approaches that still dominate design education, and by centring the literature review on environmental philosophy, this research seeks to bring the ontological questions that underpin anthropocentric behaviours into such debates. In my lecturing work, I aim to bring post-anthropocentric and more-than-human discourse more fully into discussions centred on sustainable design.

The politics of capitalism deeply impact every area of this research, from the complexity of the environmental crisis, to the practicalities of completing practice-based research. It is not possible to do more than acknowledge this here as a deeper investigation is beyond the scope of the present enquiry. Similarly, while I include a detailed analysis of environmental citizen-science, I recognise my lack of scientific training, as a self-taught amateur. My critique of the scientific method does not devalue rigorous and reproducible data, only open up a space where embodied understandings can be taken into account more fully, to dissolve some of the barriers that prevent non-scientists from full involvement in discussions and decisions about ecological relationships.

²² The initial location of this research within the Centre for Sustainable Fashion is a relic of a previous incarnation of the research question.

1.4.2 Thesis outline and summary of chapter contents

The thesis is structured in seven chapters. The first has outlined the aims, objectives, main argument and key terms of the thesis. The practice rationale and key apparatus of the light trap has been described, positioning the researcher as a citizen-scientist-artist seeking to synthesise the two disciplines into a method for developing an ecologically-engaged creative practice.

The second chapter reviews the development of natural history, ecology and conservation as related disciplines, delineating the background contexts and critical issues relevant to my involvement in citizen-science.

Chapter Three assesses the critical literature of feminist environmental philosophy (Haraway's relational ontologies and the post-anthropocentrism of Plumwood) through a focus on care (Tronto, Puig de la Bellacasa). The emergence of multispecies ethnography from anthropology is explained, and its specific relation to studies of insects examined, to assess its value as a method for decentring the human in creative practice.

In Chapter Four, I survey art forms that respond to the ecological emergency, and identify relevant practitioners that explicitly embrace a multispecies or decentred human perspective. Conventions within craft practice are contrasted with the artists examined previously, bringing the distinct values of each discipline together to present routes towards an expanded craft practice.

The fifth chapter is in two parts. The first synthesises a thematic theoretical framework from the critical literature, expressed in four concepts: *critical anthropomorphism*; *companionship*; *care*; and *letting go*. The second explains how an autoethnographic method crystallised out of reflection on fieldwork experience and studio experiments. Together, these provide a theoretical framework and methodology that inform the practice development.

Chapter Six reviews the research outputs to demonstrate how the findings influenced the motivations, forms and subject matter, to evolve an expanded practice. Three elements are identified: the development of creative writing through the diary form; collaborative practice involving moving image, workshops

and community engagement; and the formation of an experimental sculptural vocabulary for studio-based textiles.

Finally, the insights gained are summarised in Chapter Seven, showing how they meet the aims and objectives. The contributions to understanding are presented, both through the practice itself and in terms of a method for promoting a multispecies sensitivity through creative practice, and future directions and applications outlined. The appendices include documentation of the practice and links to further material.

Chapter Two – Critical contexts

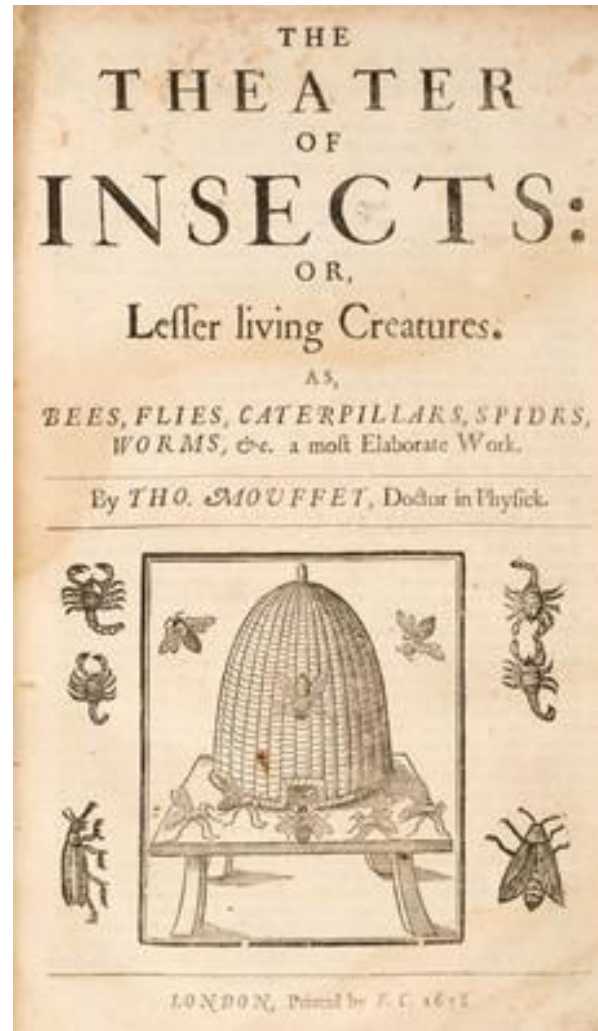


Fig. 2.1 Cover of Thomas Moffet's *The Theatre of Insects: or, Lesser living Creatures*, London 1658

It is ironic to think that man might determine his own future by something so seemingly trivial as the choice of an insect spray. All this has been risked – for what?

– Rachel Carson, *Silent Spring*. London: Penguin Books, 1962. [1972] p. 25

This chapter outlines how ecology rose out of the parallel developments of natural history as a science in Europe, alongside growing industrialisation and colonisation, leading to concerns about both the conservation of resources and the

ramifications for human health. Evolutionary thinking in biology developed scientific specialisations grounded in patriarchy, which acted to separate some human cultures from their ecological connections. The environmental challenges of the twenty-first century, recognised in the Anthropocene emergency, set the context for my thesis. In delineating my rationale for a focus on biological conservation, I highlight the role of amateurs, and the contribution of women, to argue that citizen-science revives the spirit of early natural history explorations, reconnects amateurs with their environment and gives them political agency. Citizen-science framed as multispecies ethnography provides both a theoretical and methodological basis to extend craft practice and theory towards explicitly ecological forms of expression.

2.1 Origins of ecology

Ecology, the study of relationships between environments and organisms, was originally defined by zoologist Ernst Haeckel in *The General Morphology of Organisms* in 1866. Amidst heated debates about diverging theories of evolution such as those of Lamarck²³ from 1830 and later Darwin in 1859 (Bowler 2009), the technical science of biology began to separate from broader natural history, which included philosophies of mind and consciousness at this time.²⁴ In *Creative Evolution* (1907), philosopher Henri Bergson described an original internal urge (*élan vital*) common to all living organisms.²⁵ He argued that co-evolution, the drive towards differentiation and variety through complex interactions over time, is part of this instinct. Intelligence, in contrast, is pragmatic and limited. Intuition combines both in a responsive relationship, becoming the creative urge or the potential for multiple possibilities. Bergson emphasised the importance of practical

²³ Lamarck popularised the idea that characteristics acquired during a lifetime, such as physical strength, could be inherited.

²⁴ The concept of the biosphere as a bounded system within which all energy exchanges between living beings take place was first outlined by Suess in 1875.

²⁵ Misunderstood as a naive idea about individual life force, this concept in fact describes intuition as a shared, layered response to the flow of time, in contrast with deductive reasoning, which presents memory as discrete images and representations.

intelligence over reductive reasoning alone, refusing to separate consciousness from instinct in analyses of ongoing biological change.

Initially popular, Bergson's ideas were perceived as contrary to the rationalism of French secular society by the time of the Third Republic (1870–1940). Scientific biology as a profession followed a more evidence-based route, focused on understanding the mechanisms of cell division. However, Bergson's ideas have found renewed resonance alongside the growth of New Materialism, and with ecologists rethinking humanity's relations within environments in light of the environmental crisis. Bergson is relevant to this research as a reminder of the holistic approach to natural history that informs my activity of citizen-science wildlife recording as the basis for creative practice.

2.2 Natural history

While scientific principles were formulated in the nineteenth century, the development of natural history as a discipline is far older, rooted in amateur, scholarly pastimes. In the UK, entomology, the study of insects, dates back to the Elizabethan era. Physician Thomas Moffet's posthumous *Theatrum Insectorum* (1634, figure 2.1) collating earlier scholars' work is considered the first publication to contain illustrated knowledge of British insects. The broader subject of natural history developed in Europe from the mid-seventeenth century (Salmon 2000) through Enlightenment curiosity about the natural world. Social networks such as London's Royal Society, founded in 1660, created opportunities to debate advances, and share knowledge, in the sciences. In an age that was starting to question religious ideas about the origins of life, accepted notions such as 'spontaneous generation' were put into question by physicist Robert Hooke (*Micrographia* 1665) and Antonie van Leeuwenhoek's (1673) developments in microscopy. Natural historians were prompted to focus on close observation, and to collect and describe specimens systematically for the first time since Aristotle, the beginnings of the professionalisation of these subjects. Botanist John Ray's early works on insect classification (*Historia Insectorum* 1710) laid the foundations for Linnaeus's definitive binomial taxonomy, *Systema Naturae* (1735), in turn influencing Darwin's evolutionary theories. However, classification, informed by Judeo-Christian

religious concepts of the centrality of man, reinforced anthropocentric hierarchies that are now being questioned by environmentalists and others.

British lepidoptery continued as a frontier of discovery throughout Victorian times, where those with a sharp eye could ‘describe’ a new species, provide a voucher specimen, and contribute to science. As evidenced by Moffat and Ray, most early naturalists developed their interests through patronage or as leisure pursuits. Although artists and illustrators joined the early Aurelian Societies of butterfly-hunters, meeting informally in London taverns from the mid-seventeenth century onwards (Salmon 2000), most were physicians and clergymen with significant leisure time, and so were inevitably male. Naturalist Gilbert White is an exemplar: his long study of nature in Selborne set the tone for English ecology (*Natural History of Selborne* 1789). White’s not-yet-scientifically-rigorous methods were characterised by informed empathy (Mabey 2006), and sensitivity to the particularity of place that we might now call “situated” (Haraway 1988). At a time when ecological knowledge was being established through informal exchanges between a few curious minds, no baseline existed, and so close observation over time to test hunches and assumptions was the key method.

While men had the advantage of university institutions and connections, women were also significant early pioneers in natural history. Dutch botanical artist Maria Sybilla Merian published detailed entomological plates in Amsterdam as early as 1675, before travelling to Suriname to document extensive new discoveries of lepidoptera and other insects.²⁶ Seen by others primarily as an artist, Merian considered herself a naturalist. Her independent, largely unfunded status allowed her to focus on making visible the interactions between distinct species, rather than collecting and naming specimens. She used drawing and painting to accurately record lifecycles, food plants and predation, rather than for decorative effect. In two volumes on caterpillars (*Der Raupen* 1679 and 1683), she originated the composition style of showing distinct stages of the life cycle of an insect on a

²⁶ Merian’s diaries reveal that she was aided in her collecting by enslaved people on the plantations in this Dutch colony, *Das Insektenbuch (Insects of Suriname 1706)*.

specific host plant in a single plate.²⁷ Merian's work has only recently been re-evaluated for her early contribution to biology (Etheridge 2011), rather than its previously much-celebrated aesthetics.

Although women were legally excluded from chartered organisations such as the Royal Society in Britain until the twentieth century, and subject to opposition thereafter (Mason 1992),²⁸ they could still collect, correspond with other enthusiasts, and discover new species. Eleanor Glanville (1654–1709) is the earliest British naturalist to discover and have a species of lepidoptera, the Glanville Fritillary *Melitaea cinxia*, named after her. Glanville provided the type specimen for classification by Linnaeus in 1758, and three of her original specimens still exist in the Natural History Museum collection. The work of many other significant female natural historians has been elided until recently, their contributions to knowledge sidelined within the realm of serious science. Merian was considered a decorative painter as described, and died in poverty; Glanville's family used her caterpillar-collecting activities as evidence of insanity in order to squabble over the inheritance of her property. Victorian lepidopterist Emma Hutchinson had to submit her entomological findings under her husband's name and was barred from the local naturalist society.²⁹ The focus of these female naturalists often differed from those of men, centring around breeding and rearing (Hutchinson) and making visible interspecies relationships (Merian). Relational ontologies therefore have a long history within women's science.

2.3 Development of ecology in the twentieth century

As ecology became delineated in the nineteenth century, conservation emerged as a related subject, initially fuelled by a pragmatic need to manage timber resources (since Evelyn 1662) and extending to colonial interests. Environmental pollution,

²⁷ Merian's visual style communicated close interrelationships almost a hundred years before Moses Harris's better-known *The Aurelian or natural history of English insects* (1766).

²⁸ The Sex Disqualification (Removal) Act was passed in 1919, but the first woman was not admitted to the Royal society until 1945.

²⁹ Emma Hutchinson is remembered for a variant of the comma butterfly *Polygonia c album hutchinsoni* 1881, and Sarah Patton for the first British record of Patton's Tiger moth *Hyphoraia testudinaria*, 2005. <https://www.ukmoths.org.uk/species/hyphoraia-testudinaria>

the legacy of the Industrial Revolution, drove growing concern about public health. Ecology therefore developed at a time of tension between scientific advancement and the competing interests of colonial exploitation, capitalism and planetary health, ideas that continue to define it today.

In 1962, biologist Rachel Carson's *Silent Spring* drew attention to the toxicity of industrial processes by revealing the effect of DDT insecticide spraying on wild birds. She catalogued the lack of rigorous research into the possible consequences of government biological control programmes on public health (DDT is a carcinogen), their indiscriminate impact on both wild populations and livestock, and their short-lived effectiveness on the target species themselves.³⁰ Combining scientific understanding with a communicative writing style, Carson brought these issues into the public domain and galvanised a growing environmental lobbying movement.³¹ A decade later, in *Steps to an Ecology of Mind*, anthropologist Gregory Bateson combined systems communications theory with anthropology to re-examine human's place within environments. Bateson proposed that evolution theory wrongly focused on competition between individual animals or species, ignoring their flexible relationships within ecological assemblages (1972, 451).

For Bateson, 'mind' is a function of complex relationships, not a singular quality within organisms. Human awareness is part of a larger 'mind' arising from complex connections between living and organic entities. Such ideas are newly relevant when artificial intelligence is being assessed for elements of consciousness (Lenharo 2023). While consciousness has been debated for centuries, for Bateson, determinism dominates Western cultures. Science avoids transcendental thinking and suggestions of mysticism that externalise what is not understood to overarching forces. Thomas Nagel's seminal philosophical paper *What is it like to be a bat?* (1974) also found scientific theories of 'mind' reductionist, ignoring the subjective nature of consciousness, or embodied intelligence, championed by Bergson. A specific sense of beingness was now being extended

³⁰ Citizens were instrumental in driving scientific research, by counting, collecting and sending in dead birds to be examined (Carson 1962).

³¹ A campaign to ban DDT in America was begun by the Environmental Defense Fund, and the Environmental Protection Agency was set up by 1970.

beyond biological boundaries to seek the origins of self-awareness within complex, self-organising systems, rather than individual animal units.

Bringing environments back into consideration, Bateson emphasised how the potential for variety within a system allows for trial and error. Organisms can self-correct to mitigate imbalances, but also overpopulate systems if behaviours do not adapt. He applied game theory to ask what happens when the rules (such as in international policy-making) become too rigid. The parameters of a flawed epistemology, which he usefully calls an 'attitude', to show its limitations, can be recognised and changed. In homing in on attitude or values, and the inherent flexibility within natural systems, Bateson drew biology and natural history firmly into the arena of social sciences, laying an ethical groundwork for considering human behaviour. Challenging the process-driven obsession with control of environments shows that 'settings' can be recalibrated in the face of change. In the same year, in *The Limits to Growth* (1972), systems-thinker Donella Meadows and co-authors analysed population growth and consumption in relation to planetary limits, with sobering conclusions of economic collapse. Together, contributions from contrasting disciplines brought science, politics and industrial practice further into the public arena to fuel debates about environmental sustainability.

In 1973, the Chipko movement in India became a symbol for environmental protest. Conflict arose between Himalayan villagers subsisting on forest resources in ways that maintain them, and industrial extraction (a legacy of colonial attitudes to land-use). Images of tree-clinging women resonate through the decades as bodies continue to be used for environmental resistance (Fig. 3.2). Chipko brought environmental discussions into the arena of policy-making in a way that, bearing in mind India's non-aligned status, allowed criticism of the adoption of Western approaches to sustainable development (Pathak 2020).

Founder of Deep Ecology Arne Naess argued that the separation of humans in industrialised nations from nature develops from narrow, self-limiting concepts based on ego. In *Self-realization* (1986), he proposed the 'ecological self' as an expanded sense of being, achieved through developing ethical sensitivity. Self-realisation broadens the human identification process to include compassion for other living beings and communities. This shifts the focus from mutual

recognition between individual entities to a feeling of belonging to a plurality. The 'ecological self' prefigures aspects of Karen Barad's concept of intra-action (2003). In Barad's theory, drawn from quantum physics, life comes into being (is co-constituted) *through* continuous meetings: the rippling intra-actions between assemblages are themselves the source of agency. However, for Naess, there is no way of knowing if the recognition of expanded self is reciprocated (1995 [1986]) and thus his view has the potential to render nature passive once more. Naess's ideas resonate with Latour's arguments for political ecology as a work in progress, where the knotty concepts of 'nature' and society need themselves to be unpicked before we can transcend the nature/culture binary, including a deconstruction of globalism (Latour 2004). Science is presented as the intermediary. Fellow Deep Ecologist Fritjof Capra (1996) repeatedly draws parallels between metaphysics and hard science, to show the exploration of the same phenomena in different ways.

Recalling the Enlightenment split between science and the humanities of Bergson's time, the continuous reconsideration of human boundaries shows the enduring influence of cultural and religious ideas on the policing of experimental thought in the twenty-first century. Donella Meadows focused on such paradigms in *Leverage Points: Places to Intervene in a System* (1999). Working through the effectiveness of different levels of intervention in a complex system, Meadows, echoing Bateson, concludes that an ability to recognise and transcend outmoded thought-paradigms has perhaps the most impact of all. In this paradoxical recognition of the limitations of her own discipline lies a powerful message about ideological attempts to control outcomes. The failure of successive COP summits to instigate timely change in relation to human-generated environmental impacts demonstrates the continuing folly of clinging to the levers of outmoded paradigms (McGrath 2024).

In 1942 evolutionary biologist Julian Huxley brought genetic research based on Mendel's work on heredity together with Darwin's evolutionary theory into the Modern Synthesis, defining the scientific discipline of evolutionary biology. Feminist biologists such as Haraway criticise this still-dominant approach as a limited model that relies too heavily on the notion of 'bounded entities' in competition and is still invested in the modernist idea of progress (2016, 62). However, since the 'atomic' mid-twentieth century, after two world wars, ecological

thinking increasingly located the ideological separation of human and nature, grounded in Cartesian dualities, as the cause of destructive human behaviours, the evidence for which was mounting.

Lynn Margulis, biologist and co-producer of the Gaia hypothesis with James Lovelock, developed the theory of endosymbiosis in 1967 to explain how complex, multicellular organisms evolved through a process of mutualism.³² In so doing, she proposed a radical change to the hierarchical view of Darwinian evolution, which until then had not included microbiology.³³ Biological symbiogenesis (Margulis 1971) demonstrates that evolution at the very origin of complex life is driven by cooperation between different species at a cellular level. Her important research demonstrates an alternative to the simplified paradigm of linear progression favoured by the Modern Synthesis. It paved the way for the inclusion of ecological research, such as niche exploitation, adaptability and selective inheritance not driven by genes alone, into the science of developmental biology (Gilbert et al. 2015). Haraway picks up on the transformational power of horizontal gene transfer, challenging as it does simpler theories of linear development to suggest a more complex and chaotic biological (and therefore social and cultural) reality with porous boundaries. To decentre the human in conceptions of nature highlights our origins as merged beings, reliant on a network of relationships. Life is communal rather than individual.

Even so, discussions of symbiosis are riddled with anthropomorphic metaphors, which can be crudely simplified into political terms: idealised co-operation as a socialist interpretation of nature, and ‘survival of the fittest’ as a constant battle between individuals within species, portrayed in free-market, or economic language (Sheldrake 2020).

³² where one organism with a different genome lives inside the cells of another.

³³ The scientific ‘Modern Synthesis’ (Huxley 1942) theory of evolution did not address symbiosis, sidelining the study of assemblages such as coral reefs and lichens (Haraway, AURA conference, Santa Cruz, 2014).

2.4 Anthropocene ecological emergency



Fig. 2.2: *Protester at the Global Climate Strike, London 20 September.* Katherine Pogson 2019

Despite rejection by the Subcommittee on Quaternary Stratigraphy in March 2024 of a proposal to formalise the Anthropocene as an official geological epoch, the term has already entered common parlance (Witze 2024; Carrington 2024). Anthropocene denotes a time of “unacceptable global environmental change” (Rockström et al. 2009) in which human activity has irreversibly impacted planetary systems (Crutzen and Stoermer 2000), marking the end of the climatic stability in which human civilisations flourished. Although climate variations have always been with us (Frankopan 2023), we now recognise the unintended consequences of human impacts, even as the speed and scale of change challenges our ability to understand how to live with and through them.

David Maggs and John Robinson (2016) maintain that the Anthropocene marks the end of the Modernist project in which the rational doctrine of science held sway. The objective method is inadequate in face of the interpenetration of nature and culture now evident at a geological level. To see the problem as only one of scale

ignores the “deeper ontological rift” at its heart. The data-dump alienates rather than activates. Empirical fact-based framings simply apply existing “managerial” approaches at a planetary level, risking further disenfranchisement of populations (176). The juncture requires embracing subjectivity to counteract disenchantment, but subjective contributions to the debate have been marginalised. This is not to dismiss science, but place it within the larger context of cultural imagination – Haraway’s ‘stories that tell stories’. While scientists disagree about start dates³⁴ and definitions (‘epoch’ has been rejected, but the looser geological ‘event’ could be a compromise), Tsing (2017) points out that rapid species loss might characterise the Anthropocene as a short, sharp boundary event between states (as are previous extinction events in the geological record), rather than a long era. While scientific squabbles about definitions perhaps exemplify the objective attitude critiqued by Maggs and Robinson, arguments about nomenclature also pervade cultural debates in different disciplines.

The proposed naming of the Anthropocene age has been contested by numerous cultural scholars (Arons 2023; Colebrook 2017; Chwałczyk 2020), principally for its fetishisation, or annihilation, of the still central ‘anthropos’ or (Western) ‘Man’. Claire Colebrook dissects who might be implicated or erased in a construction where ‘anthropos’ indicates a universalised humanity, eliding differing degrees of responsibility, consumption and access to power. Other feminists suggest Plantationocene (Tsing in Haraway et al. 2016) to define the problem as industrial and behavioural, though perhaps still nested within patriarchy rather than innate. Andreas Malm and Jason Moore’s Capitalocene (2015) further underlines the colonial and extractive origins of the problem in the Global North, while Jussi Parikka’s Anthrobscene (2014) draws attention to the forceful materiality of technological media in relation to environmental damage. The “total cyberneticization” of existence marked by the Anthropocene (Hörl in Braidotti and Hlavajova 2018, 173) expands ecological study to include the impact of human technologies as explicit forces in a number of ways.³⁵ Colonial and industrial

³⁴ Suggested dates range from the beginning of agriculture, with its accompanying deforestation, to the Industrial Revolution, while the rejected proposal from the Anthropocene Working Group chose 1952, when fallout from nuclear weapons testing became detectable.

³⁵ For lepidoptera this includes pesticide use, light pollution and intensive agricultural practices.

injustices are deeply implicated in any discussion of the Anthropocene (Yusoff 2018). Reconception of the agency of material flows (Bennet 2010) is also central to its characterisation. Within the boundaries of this research centred on biodiversity, I focus on feminist and environmental approaches in the literature review below.

Looking beyond characterisations for useful ways through the concept, geographer Holly Buck rejects the deterministic inevitability of the geological focus, proposing a re-engagement with “enchantment” to counteract the deadening effect of too much data (2015, 4). To counter labels that recentre human agency, Haraway celebrates the energetic potential of a Chthulucene where species mingle in the messy ‘ongoingness’ of ‘multispecies-becoming-with’ (2015).³⁶ In relation to biodiversity, conservationist E. O. Wilson imagines an Age of Loneliness caused by the rapidity of species loss: the ‘Eremocene’ (2013). David Abrams joins those who dislike the ‘*anthropos*’ emphasis for removing any possibility of autonomy for more-than-human life (by giving ownership of the planet, via the problem, to humans). He also fears, with Buck, for the loss of the awe that immersion in nature can inspire. Centring the necessity of an ethical response to the violence of biodiversity loss, Abrams suggests the Humilocene, an Age of Humility (2024, 346). His coinage acknowledges the soil (humus) on which humans depend and will return to, to recalibrate attitudes to our destabilising actions, and give a warning about humiliations to come.

The varied approaches outlined have in common a coming-to-terms with (uneven) human culpability for the scale of ‘the trouble’. Perhaps only Haraway and Buck embrace a truly liberating vision for the far future, based on decentring the human. Geographer Jamie Lorimer navigates a path through the competing ideas of human withdrawal or far-reaching control, by showing how evolution and variety rely on change in dynamic landscapes (2015). Anthropologist Deborah Bird Rose returns to the usefulness of the ‘*anthropos*’ term. She draws attention to capacities for scales of violence as well as sensitivity, which may be traits specific to humanity, saying “it is not yet time to jettison a sense of human exceptionalism” (2017, 55). Rose

³⁶ Though she also likes ‘*The Dithering*’, from sci-fi novel 2312 (Robinson 2012), which emphasises the paralysis and anxiety that characterises many social responses to the ecological crisis.

outlines an ethical stance that understands the unequal way in which consequences are caused and experienced globally (Paul 2020).³⁷

Therefore, while the naming of the Anthropocene is contested, I continue to use it in homage to Rose. As a shorthand for human culpability it is widely understood, and capacious enough to enfold the humility of Abrams, the anger of Tsing, and the boundary-dissolving fables of Haraway. The concept highlights problems with the scientific method, which I address through expanding citizen-science activities to include reflective creative practices in my methodology. It stresses the need for human sensitivity as delineated by Rose. I develop this through a theoretical approach based on companionship and care, ideas that in themselves throw up questions about humility and control.

During the development of science as a profession, relational theories of biological intelligence were sidelined in favour of more deterministic interpretations of evolution. Nineteenth-century evolutionary biology was infused with a belief in the perfectibility of man. Concepts of the unity between living things, and consciousness or 'mind,' were squeezed out of subsequent biological thinking, as a deterministic paradigm replaced the religious tenets of creationism that the Enlightenment had dislodged. The Modern Synthesis ignored the symbiotic origins of complex life, the basis for subsequent evolution, as expounded by Margulis. By drawing attention to the biological reality of symbiogenesis, feminist thinkers such as Haraway and physicist Barad challenge patriarchal thought processes in science, and embedded in industrialised cultures more widely, which have contributed to environmental degradation and human alienation within ecologies. Societal functions can be prone to error, as Meadows pointed out. Epistemological errors that alienate and disempower are deeply embedded in industrialised cultures and histories, making them difficult to detect, and alter. Destabilised planetary forces due to human actions are the evidence, through which we are now living.

³⁷ In a Data Studio workshop with climate scientist Dr. Fredrieke Otto at Modern Art Oxford, 24 May 2017, (part of the *Future Knowledge* exhibition) I helped build a model visualising the dispersed and unpredictable causes and effects of extreme weather events to present the link between consumption in Europe and flooding in Asia.

A holistic view of the life force can be traced further back to the disciplinary split at the end of the nineteenth century when philosophies of mind and intuition, exemplified by Bergson, became separated from evolutionary discussion. Revisiting the early frontier of natural history allows the connection between human observational being-in-the-world, and the ability to contribute to cultural understanding of ecological relationships, to be revitalised. The (perhaps privileged) amateur has historically played a significant role in identifying species and interconnected lifecycles. The natural history project for entomologists in the Anthropocene is conservation rather than classification. Amateur practices continue to contribute through direct observation in the field. The hunt for new species, although incomplete, has been replaced by the collection of local data that supports restoration practices. In the current ecological emergency, citizen-science monitoring demonstrates the resurgent value of amateur activity, and activism. Volunteers not only track the anthropogenic changes happening at scale that open up the field to important discoveries, but develop a sense of agency in relation to their environments. Such practices expand the terms of reference for what is considered valuable to be recorded in the first place, dissolving the barriers created by the professionalisation of science and bringing the activities within the field of creative practice. Creative practices stimulate paradigm shifts by making the limits of cultural assumptions visible, allowing their values and suitability to be questioned, expanding access to knowledge in the process.

2.5 Biological conservation

They carry Eucalypt futures on their furry little faces, and across the patchy and increasingly fragmented landscapes of contemporary Australia, the renewal of woodland and forest life hinges on this specific yes.

– Deborah Bird Rose. "Shimmer: When all you love is being trashed." in *Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene*. University of Minnesota Press, 2017, p.60.

In caring for endangered flying foxes in Australia, Deborah Bird Rose illuminates the interconnective power underpinning planetary life. For her, pollination is “a

kiss of symbiotic mutualism” that powers the future through genetic exchange (60). Her words could equally apply to Britain’s moths, and her message is to support these invisible yet vital relationships.

It is estimated that humans have described only about 20% of all extant species on Earth to date (Wilson 2016, 23). With increasing biodiversity loss characterised as the human-generated sixth mass extinction event (Leakey and Lewin 1995; Kolbert 2014), many species may disappear before they are known to science. Biological conservation seeks to discover and describe all living species in order to fully understand their roles and requirements within ecological assemblages and to protect their future existence. In defining the field as an urgent response to “crisis”, Michael Soulé aligned the discipline with art practice: both share an interdisciplinary, practical approach that embraces the desire to act on intuition in uncertain circumstances (1985, 727). Soulé’s definition of conservation assumes both an innate value in biodiversity, and the central role of humans in both threatening and preserving it. Yet the classification of newly discovered species is also troubling, creating an arena in which protection is balanced against the potential for disturbance and exploitation (Kirksey 2016). While conservation seeks to apply ethics to scientific knowledge, it is inevitably an exercise in selective care. According to Wilson, the full census of extant species on Earth will take another two centuries to complete (2016, 24), yet even if the project were feasible, species are constantly evolving, and human experiments with genetic modification are disrupting the existing taxonomic trees at a rapid pace.

Environmental humanities scholar Thom van Dooren excavates a set of ‘conservation ontologies’, which he argues are not sufficiently contested. Embedded orthodoxies include the idea that humans have created the problems and therefore must control the remedy. The ideal of a static, primordial state supported by the adoption of some indigenous practices is also popular, but selectively applied, tending to historicise ideas of ‘the native’ (2015, 8). Problems begin with terminology. The notion of ‘species’ itself fixes artificial boundaries between living entities, enabling the construction of hierarchies of value. Alongside the problems with species boundaries (constantly changing taxonomies and ignoring of some life-forms) van Dooren contests the use of ‘biodiversity’ as a catch-all term that does not sufficiently delineate important subtexts, such as

invasive, introduced and native (2014, 291). Biodiversity is instrumentalised by genetic industries, and financialised as an asset within urban development (Schwabe and Pascual 2022, 17). It is also accepted as a cultural value to preserve certain animals for hunting, and used to support management systems that prioritise the native and the rare in selective circumstances (van Dooren 2014, 295). But rarity is not evenly distributed: some organisms may be abundant somewhere and endangered somewhere else.

Unexamined notions of biodiversity as a good in itself underpin exhaustive maintenance efforts in an axis of competing care and violence that is often invisible (van Dooren 2015), demonstrating the importance of a situated perspective. Wilson states that restoration of habitats and removal of species considered to be invasive have been proven to lower extinction rates in the US by around 20 percent (2016, 56), while evolutionist Menno Schilthuizen (2018) shows that urban centres are evolutionary hotspots, where biological adaptations proliferate at speed due to the range of global species present and the presence of niche habitats. But conservation at species level often means killing or caring for individuals, using a hierarchy to decide which to preserve. For example, the native British Box tree *Buxus sempervirens* has always been rare in its stronghold on the chalk in south-east England. Extensive ornamental hedge planting of Box has provided a vector for infestation by the adventive³⁸ box-tree moth *Cydalima perspectalis*.³⁹ As few predators yet exist in the UK, it is seen as a highly destructive pest that might threaten the rare refuges where box survives (DEFRA 2024). Here the value system prioritises rare, native and endangered status.⁴⁰

The Horse chestnut tree *Aesculus hippocastanum*, introduced into the UK in 1616, has been subject to infestation by the Horse chestnut leaf-miner *Cameraria ohridella* since 2002. This micro-moth discolours the leaves, which may weaken the tree but is not fatal. Both are non-native species, but fondness for the childhood conker tree

³⁸ Adventive species are wild, but established outside their usual habitat due to human influence.

³⁹ First recorded in Kent in 2007, *Cydalima perspectalis* is presumed to have been imported from Asia on its eponymous shrubs in the *Buxus* genus, and is currently skeletonising a clipped hedge near you. See <https://www.ukmoths.org.uk/species/cydalima-perspectalis>

⁴⁰ Anecdotally, on a visit to Box Hill (named for the frequency of wild box trees) in July 2023, no sign of *Cydalima perspectalis* was found.

gives it a cultural status denied to the (tiny, beautiful gold-and-silver) micro-moth. Both 'invasive' moth species may settle into balance within a functioning ecosystem in time. Perceptions of charisma differ.



Fig. 2.3: Box-tree caterpillar (*Cydalima perspectalis*) May. Katherine Pogson 2019



Fig 2.4: Box-tree moth (*Cydalima perspectalis*) October. Katherine Pogson 2017

While humans are responsible for significant impacts, especially since agriculture was developed, Haraway compares their scale to the influence in time and space of

plants and bacteria (2015). In foregrounding the more-than-human mechanisms that maintain life over millennia, she draws on Tsing's 2017 identification of the biological refuge as crucial to 'ongoingness'. The notion of the refuge highlights both how hierarchies of indigeneity evolve, and how species might survive. The Ice Age refuge is used to rank species present in or first to colonise post-glacial Britain as native, for example. Wildlife conservation planning often includes connective corridors between fragmented habitats for mobility and to avoid inbreeding, even as Schilthuizen identifies an advantage in isolation for 'urban refuge' populations, whose gene pools respond to specific local circumstances over time. Refuges offer space and time to adapt, and recovery requires the continuing existence of diverse niches. Twenty-first century displacement of humans through the direct (and less direct) consequences of climate emergency, and the lack of refuges for them resonates here, showing that, whatever we decide to call it, we are already in the middle of an extinction event that touches humans and more-than-humans alike.

A piecemeal process-driven approach to conservation at ecosystem level overlooks granular genetic variation, limiting results (Wilson 2016). The 30% rewilding goal set at the COP15 biodiversity summits in December 2022 was based on Wilson's 'Half-Earth' suggestion (2016) to set aside areas where humans do not have impact and to restore certain habitats to the point of self recovery. Rewilding extends restoration to include the reintroduction of missing species, with the aim of developing self-sustaining ecosystems from which human management can ultimately be withdrawn. Increasingly, the associated benefits for water drainage and flood defence are being realised. Isabella Tree's work at Knepp, West Sussex, is encouraging waterscape management through the reintroduction of beavers.⁴¹ Knepp has seen the reappearance of the Small Tortoiseshell butterfly, alongside nesting storks, and growing numbers of Turtle doves, showing that once the conditions for flourishing are established, the more-than-humans will do the rest by themselves. Rewilding is based on the keystone species theory, itself a hierarchy, that megafauna (kept in check by apex predators) once effected a dynamic churning of landscape, producing habitats that supported diverse species. Humans now represent the large disruptive herbivores, as one of the few megafauna left. But time is crucial to restoration, and levels of intervention depend on the size of an

⁴¹ <https://knepp.co.uk>

area to be conserved (Tree 2018). Rewilding paradoxically requires human intervention to start it off, but then the removal of humans from an area of land, to let autonomous more-than-human processes develop over time. Approaches vary from restoring a specific plant understory that allowed an autonomous ecosystem in Florida (Wilson 2016, 176), to the Carrifran experiment in Scotland, returning a denuded valley to the species composition of the post-glacial period. Doing so required active *removal* of existing megafauna (deer and sheep) and plants, and repeated replanting of selected tree species only (Ashmole and Ashmole 2009).

Criticisms of rewilding sometimes play out along class lines. Proposals for a new national park in north Wales could boost biodiversity and lower carbon emissions, but are culturally problematic. Locals see the scheme as creating a middle-class playground for “townies” and a threat to traditional livelihoods such as hill-farming of sheep (Wall 2024), while post-disturbance brownfield sites have been shown to support greater species richness than green belt and marginal farmland (Macgregor et al. 2022). Drawn to the edge lands, multispecies anthropologist Anna Tsing proposes a “project of capital- and state- unmaking” to magnify these areas where abundance develops in the meeting of human activity and neglect (2012, 151). At the opening of the Goldsmith’s Centre for Art and Ecology in 2024, gardener Benny Hawksbee championed the chaos of disrupted sites as driving biodiversity, finding an arrogance in the fencing off of areas of land for the more-than-human. Hawksbee advocates invention rather than restoration, through the more inclusive idea of the commons. A ‘mosaic’ approach to urban settings can integrate low-impact spaces into densely populated areas to foster both community engagement and a variety of habitats for insects.⁴²

I consider conservation of diversity and abundance of species in an ecological emergency as part of a dynamic process of evolution, requiring a multi-pronged approach that may appear contradictory. There is a place for rewilding, because human domination of planetary systems is clearly driving a rapid thinning out of different types of life, leading to what Tsing calls “simplified ecologies” (2016, 4). On the other hand, there is some legitimacy to Hawksbee’s comment about exclusion, recalling the enclosures of the eighteenth century. The material

⁴² Hawksbee, Benny. “Brownfield site for diversity.” Speech at the Launch of the Centre for Art and Ecology at Goldsmith’s. Deptford. September 27, 2024.

recombinations characteristic of the Anthropocene may also accelerate revolutionary processes. Cities are hotspots for interaction between species, making them ideal for experimental living with the more-than-human. In the spreading density of urban landscapes there is room for three seemingly contradictory approaches to co-exist: low-maintenance areas where colonisation takes place by minimising human acts; selective isolated refuges that preserve 'native' species and habitats; and managed areas such as gardens, parks and farms that maintain food production and different cultural practices. Such activities are neither static nor in direct competition with each other. The question is who or what controls the terms of coexistence.

Conservation efforts can be seen both as a relinquishing of human territory and an act of control. I think of the archived museum objects that began my research, signalling incomplete stories and sidelined relationships. Museums and art galleries conserve time capsules of attitudes that have become contentious, and are now subject to questions about how far to restore, and to where. In developing a creative practice using citizen-science wildlife recording as a springboard, I recognise that a conviction that native biodiversity is valuable on its own terms needs to be critically evaluated through situated knowledge of specific locations. Hierarchies of value cannot be completely removed when competing interests come into play. As Heise points out, it is not the role of conservation biology to decide the ideal form of relationships between humans and other species (2016, 199). While biological conservation provides vital information about human impacts on wild populations of species, it does not fully engage with socio-political questions about who is represented or excluded, and what the consequences of decisions that affect many interconnected beings might be. The central dilemma for conservation is to evaluate the competing needs of different living populations against their relative agency to affect change. Citizen-science, amateur activism and creative practice can bring different perspectives to enrich the conversation.

For butterflies and moths in the UK, conservation centres on habitat restoration, providing the correct food sources and conditions for breeding.⁴³ The picture is complex (Tordoff et al. 2022), because, although the decline in abundance for

⁴³ The rare Heath Fritillary butterfly has been boosted in Blean Woods, Canterbury, due to habitat restoration <https://butterfly-conservation.org/our-work/helping-the-heath-fritillary>

several native moth species is alarming,⁴⁴ some thrive, expanding their range and increasing in number (Boyes et al. 2019). According to Butterfly Conservation (n.d), in the twentieth century 62 moth species became locally extinct in Great Britain, but 89 new species established themselves. The UK's position at the northern edge of Europe's temperate geography marks a key boundary where the influence of climatic changes can be studied. Montane species, such as the Grey Mountain Carpet, *Entephria caesiata* retreat upwards into ever-shrinking areas of bilberry and heather. Woodland species such as the Scorched Wing *Plagodis dolabraria*, spread more widely and thinly, or migrate north, following changes in vegetation or temperatures (Fox et al. 2021). Species considered invasive, such as the Box-tree moth *Cydalima perspectalis*, move around the globe with human transportation. Other migrants such as the Silver Y *Autographa gamma*, travel vast distances in the high jet stream winds (Chapman 2010). Knowledge of these patterns of change, and their drivers, allows conservation efforts to be effectively targeted.

To activate a practice of decentring the human in this context, as a multispecies researcher I begin by asking "how do moths experience the Anthropocene?" Intensive agriculture for human food production is one of the chief causes of the decline of certain moth species and many other insects. Specialists evolved to exploit niche relationships may rely on a single plant species for sustenance and shelter. Loss of wild plants creates "ecological simplifications" (Tsing 2016, 4), thinning layers of biological interreliance. Neonicotinoid pesticides are thought to be responsible for widespread pollinator decline (Woodcock et al. 2017), and affect pheromone release and reception in male moth antennae (Navarro-Roldán et al. 2019). Fragmented habitat both isolates and disperses populations, forcing them to cover more ground to feed and reproduce. Light pollution from motorways and industry suppresses the fertility of night-flying moths, disrupts their navigation systems and alters flying heights (Boyes et al. 2021). Such "cascades" of "failing connectivities" drive extinction (Rose 2017, 52). In short, the experience of moths is one of poisoning, starvation, isolation and exhaustion (See *Species Stories* 8, p.336)

⁴⁴ The Rothamsted Insect Survey found that 41% of larger moth species (175 species) decreased in abundance between 1968 and 2017. The Garden Tiger *Arctia caja* declined by 88% between 1970-2016, while the Ruby Tiger *Phragmatobia fuliginosa* is 212% more abundant (Randle et al. 2019).

2.6 Citizen-science



Fig. 2.5: *Moth ID session at Woodberry Wetlands, London Wildlife Trust, 26 July.* Katherine Pogson 2016

At its broadest, citizen-science describes public participation in scientific research, frequently alongside professionals. The term defies precise boundaries however (Haklay et al. 2021), and that is one of its strengths. Bonney et al. 2009 first outlined the combination of scientific enquiry and ecological education through public participation in their work at Cornell Lab of Ornithology. Early projects exhibit a clear-cut division between amateur and professional roles, with narrow definitions of methods. Public education was a goal from the start, to increase both ecological literacy and understanding of scientific processes. The need for ecological information at scale to apprehend global biological trends is vital. However, the Lab's initial top-down view of knowledge dissemination, and the requirement for some participants to pay fees, raise ethical questions about ownership (Lave 2012). Robinson et al. (2018) later formulated Ten Principles of Citizen Science, hoping to promote a more widely applicable ethical approach. Alongside an obvious scientific outcome, principles include the input of, and benefit to, citizen participants to be clearly recognised and feedback given, biases to be acknowledged, and results to be open access. Questions about the quality of

volunteer-collected data persist (Aceves-Bueno et al. 2017) and could be used to push back against community-based environmental activism. Equally, accusations of selective data-use by water companies are common (Surfers Against Sewage 2024). Lack of rigorous methods or training may produce anomalous data, but narrow scientific interpretations of value may equally miss large stories. Accusations of sloppy data-gathering are not confined to citizen-science projects: a 2017 German entomological survey that identified biomass loss as an overlooked factor in insect decline (Hallmann et al. 2017) faced more scrutiny of its sample sizes and methods than recognition of the important indicator it revealed.

Non-governmental organisations in the UK⁴⁵ tend to value citizen-science as a public engagement and awareness-raising activity, while its main role is to gather massive datasets quickly and cheaply for interpretation by professionals (Haklay et al. 2021).⁴⁶ Projects can be organised in three ways: through contribution, collaboration and co-creation. However, evaluation of public participation in scientific projects is patchy. Although conservation biology is focused on practical protection and restoration, data-focused schemes have only an indirect effect on the ground. Community-based, activist-led projects are likely to involve more co-design and collaboration, and such inclusive programmes have greater site-specific impact through stewardship (clearing, replanting, rearing) while also building capacity and outreach initiatives (Ballard et al. 2018).

In terms of volunteer motivation, Knapp et al. (2021) found a gap between knowledge and action when researching public interest in pollinator decline. Psychological and social factors such as confidence in ability to help, and experience of contact time with nature were more important in driving action than knowledge, while barriers to action stem from social pressures about the attitudes of others, such as the desire for a tidy garden (214). Therefore, removing practical and social obstacles to conservation action is more effective than awareness-raising alone. As gardens make up a significant area, accumulated

⁴⁵ Surveys include the Big Butterfly Count, Garden Birdwatch and Bugs Matter (which uses a cut out 'splat-ometer' to count insects squashed onto car number plates to monitor abundance).

⁴⁶ Such as the Zooniverse online portal, where volunteers can monitor, count and assess digital imagery, such as of birds, for ecological research, and crowdsource solutions to systems design. <https://www.zooniverse.org>

micro-actions within them could benefit pollinators considerably. Tackling social barriers facilitates conversations that may build public pressure for environmental policy change more widely.

Citizen-science therefore involves both collecting information and promoting ecological understanding and practices. Volunteers donate significant labour and expertise – at the Butterfly Conservation AGM in 2020, the unpaid labour contribution to eight citizen-science projects was calculated to be worth £14 million. Knowledge produced through citizen-science is vulnerable to exploitation by neoliberal forces, however (Lave 2012). Environmental volunteering is often presented as a leisure and mental health-related activity, but results can be appropriated for ends not agreed on. In *Offsetted*, Cooking Sections (Schwabe and Pascual 2022) trace how the Bloomberg Million Trees campaign in New York in 2007 involved 12,000 hours of community-based labour to inventory the city's trees prior to an ambitious planting project. While no doubt fostering community engagement and other benefits, the information collected for free facilitated the financialisation of trees for their environmental services (such as carbon storage and pollution-removal), turning them into tradable commodities within real estate (2022, 18). In a policy of 'mitigation', businesses pay for trees in one place to be 'maintained' to allow the destruction of trees elsewhere. Presented as a net-neutral transaction that preserves overall biodiversity even as it destroys specific habitats, stewardship thus becomes a conduit for extraction of value. Lave (2012) argues that the urgent ecological emergency exposes environmental science and biodiversity particularly to "neoliberal strategies of accumulation" due to the multiplicity of different fields not necessarily in conversation with each other, and the race to publish useful knowledge (26). Local and indigenous knowledges can be "mined" even as they are celebrated. Alternative voices may be amplified, but they are received within a commercial framework of appropriation that controls the end use (29). Her solution is to redirect neoliberal values such as "choice, accountability and relevance" towards more socially minded goals (31). I believe this can best be tackled through cultural outputs seeding cultural change.

Environmental fieldwork is concerned with creating dynamic representations of more-than-human lifeworlds over time, and in motion. In recent years, geographers have expanded ecology to embrace phenomenological and

posthumanist perspectives. The discovery of an extremely rare decay-loving bee-mimic fly in Abney Park Cemetery⁴⁷ through citizen-science recording activity, brought urban development, conceptions of space-time and ecological conservation into focus. Matthew Gandy asks what rarity signifies in an urban context, highlighting the role citizen-science plays in challenging value systems (2019). In 2013 the site was made vulnerable by adjacent development plans. Local volunteers, photographers and self-taught experts compiled a detailed “collaborative ecological inventory” alongside professionals (397). Methods included oral testimony, historical research, regular site surveys and collecting physical specimens. Data from Abney Park both enriches and challenges the structures of professional ecology; the local amateur brings a contrasting set of attitudes to the ecological discourse, sharpened by the urban setting.

Grassroots environmental activism is sometimes cast as a symptom of the defunding of ecology within government (Lave 2012, 26). Intensive urban building and lack of protection for significant sites causes frequent land-use disputes between locally organised objectors and impoverished councils. The designation of Sites of Special Scientific Interest, the only legal protection available, rarely recognises urban nature in densely populated areas (Gandy 2019, 393). Its absence, evidencing the continuing nature/culture divide that sees “ancient woodland” (itself an intensely managed semi-industrial habitat) as the marker for value, gives ammunition for opportunistic lawsuits to developers. Employment opportunities for ecologists in an austerity landscape can produce “methodologically useless” surveys to support intensive building applications – surveying bats in a nearby carpark, but not the cemetery itself, for example. Creating protected areas in isolation from wider pervasive action is ineffective (396).

Despite seeing their emphasis on subjectivity as contrary to both utilitarian and justice-based arguments, Gandy argues that closer dialogue between posthuman and new materialist discourses and urban ecology can expand the grounds for successful conservation efforts. Alongside greater appreciation of the material agency of wild creatures, urban ecology requires an understanding that is not oppositional to, but indeed expands, empirical and phenomenological valuations of

⁴⁷ Stoke Newington, Hackney, opened in 1840.

‘nature’ to include appreciation of the different space-times on which they operate (392). Extending forensic ecology’s scope through an engagement with more-than-human time frames can produce new knowledge. Processes of decay evidenced through insect and fungal activity indicate longevity of occupation, illuminating social and political stories of previous living landscapes. Designing away decay in urban settings cuts off longer lifecycles, and simplifies environments. Embedding a deeper understanding of biological lifetimes at different tempi could influence future legal frameworks of protection.

To develop more nuanced frameworks of value, Gandy underlines how a focus at species level (even ‘indicator species’) has its limits. Species designation isolates the organism from its context, as Bateson (1972) pointed out, and creates hierarchies of relative value (Bowker 2000), with insects low down the pecking order. Protecting populations within functional ecosystems is a more ethical approach. Gandy acknowledges various value systems for conserving urban nature that are validated to some extent culturally (400). Alongside instrumental and leisure qualities, aesthetic and nostalgic sentiments exist, together with the argument by anthropologist Hugh Raffles (author of *Insectopedia* 2011) for engaging with ‘insects on their own terms’. Widely used to market wildlife charities and citizen-science projects, these attributes are nevertheless seen as unscientific, even as scientists share the motivations privately. Gandy’s case study illuminates the vitality and social relevance citizen-science brings to conservation arguments, and in doing so, advocates an expansion of recognised methods. A “grassroots form of care” can bring local material knowledge, cultural and vernacular practices, and social and political stressors into play alongside scientific professionalism and governmental power structures, to produce place-based “biological opinion” that may orient decision-making towards different ethical choices (401).

Geographer Jamie Lorimer illuminates the centrality of the embodied sensory skills required to produce such qualitative data (2008). The corncrake shares habitat with Scottish crofters in the Western Isles, where land practices support the birds’ breeding requirements. As the bird is seldom seen, making it difficult to monitor and protect, the RSPB corncrake census involves listening and tracking the calls of adult males. Surveying requires geographic knowledge, physical agility, good hearing and the ability to judge distances and differentiate between sound

sources in the dark, as well as sensitivity to the particular socio-political landscape. It is a bodily process of negotiation carried out between scientists, birds, crofters and place (379). Listening realigns the body in response to sonic cues, training the brain to tune out certain sounds, and to synchronise stimulus and movement through repetition. The corncrake researchers develop an affective understanding that allows them to identify unseen individuals on the move. In contrast, field notes require stepping back offsite to interpret both acoustic and spatial memories to make them intelligible to others. The relational skills required reveal two different modes of 'becoming', resonant with the autoethnographic method, which moves between experiencing and examining a state of vulnerability in order to shed light on a broader context (Ellis 2007, 14). In this way, the corncrake census transcends a set of transcribable methods. Emotional motivations for undertaking this labour are key to mastering time-consuming skills. Turning birds seen as "background noises" into "visible ambassadors" involves endurance, but also joy in the process, deep appreciation of ecological place and time, and gratitude for opportunities to live and work in wild places (380). Interestingly however, surveyors admitted to social self-censorship when discussing the emotional side of the job. They feared being seen as romantic and unobjective, accusations that diminish scientific professional standing. Puig de la Bellacasa (2017) has drawn attention to contradictions in language, where scientists may be squeamish about anthropomorphic projection in an emotional register, but are happy to use the mechanistic terms of 'jobs' and 'functions' to illustrate ecosystem services.

Finding ways to make the intangible concrete and comprehensible is also the remit of creative practice. The act of representation raises ethical questions about accuracy, power and bias, which affect both biological conservation and art practice. Ultimately, the corncrake researchers hope to facilitate "new forms of representation, democracy and environmental citizenship" for the more-than-human (398-9). This is a political stance that relies on ethical interpretation of the data, but also a responsive sensitivity to specific contexts. Environmental conservation is based in a belief that organisms need to be quantified in order to be protected, but data revealing movements of population can be co-opted for other purposes. Long-term projects also rely on trust-building and respectful community relations. Accuracy in the field requires an embodied

engagement, which in turn is built on improvising one's own methods within the broader survey parameters. The corncrake surveyors are not amateur volunteers, but Lorimer's emphasis on affect and emotion are equally relevant to citizen-science fieldwork, while the challenges of how to collate and interpret findings resonate with art practice-as-research. Both practices are driven by emotional connection, requiring a set of context-specific ethics learned through bodily engagement over time. In this sense, the parameters of a citizen-science project are only a rubric, a score for performance that the body brings alive.

In collaboration with art practice, citizen-science can expand methodological approaches, enhance what is communicated and valued as 'data', and encourage activism. By making issues publicly visible it can influence research agendas, bypass red tape and put information into the public domain quickly (Haklay et al. 2021). Citizen-led change has the potential to have significant impact, such as on carbon emissions: "citizens can deliver 27% of the change needed in the next ten years" (Bailey 2023). A relational model that acknowledges 'horizontal' knowledge transfer might decentre the scientist within citizen-science; not to foreground the amateur, but to highlight the multidirectional flow of insight and understanding more fully, and make the layers of value more publicly visible. Broadening cultural debate may lessen the inhibition felt by some scientists to acknowledge the role of emotion within ecology, thus expanding the terms of reference for value systems in ecology (Schipper et al. 2024).

Chapter summary

This chapter has outlined how the subject of ecology originated in the tension between the growing science of natural history, and mounting awareness of human generated environmental damage during the rise of industrial and colonial development. I have shown that natural history as a scholarly discipline is rooted in a time before the professionalisation of science, when philosophical enquiry had not yet become separated from the endeavour of understanding the living workings of the Earth. Twentieth century ecology identified this binary and hierarchical distinction between humans and nature as one of the causes for continued environmental degradation. Twenty-first century science recognises

that the scale of these forces have engineered the Anthropocene ecological emergency.

Together, these contexts form the basis of my focus on biological conservation as a relevant subject for investigation through creative practice. I argue that the amateur citizen-scientist, reminding us of the early natural history pioneers, can challenge the disciplinary boundaries of professional ecological science and bring social and cultural elements into consideration. The creative practitioner can further expand the field by communicating understandings gained, using a variety of expressive methods. My research interprets my citizen-science fieldwork moth-recording through a sensory, multispecies lens that seeks to decentre the human within their perceptions of nature relationships. The practice is discussed fully in Chapter Six.

Chapter Three – Critical literature



Fig. 3.1: *Craft, Anthropology and Ecology Venn diagram*. Katherine Pogson 2017

Only by... expanding our notion of kinship will we achieve the psychic infrastructures necessary to build a caring society that has universal care as its ideal.

– Andreas Chatzidakis, Jamie Hakim, Jo Litter, and Catherine Rottenberg.
The Care Manifesto: The Politics of Interdependence. Verso Books, 2020, p.33

Chapter Three delineates the critical literature informing this research. I first focus on feminist philosophies of care (Gilligan, Tronto) to show how they continue the theme of challenging professional boundaries by insisting that care is a communal, cultural responsibility. An assessment of Puig de la Bellacasa's extension of care to more-than-human concerns follows, outlining how the conceptual and practical applications of relational theories can be illuminated through creative practice.

Australian ecofeminist Val Plumwood's dissection of anthropocentrism and Donna Haraway's relational arguments rooted in biology both question the nature/culture binary, providing a theoretical framework for this enquiry. The foundational influence of Haraway's biology-informed approach to more-than-human companionships is discussed through four central texts: *Situated Knowledges* (1988), *The Companion Species Manifesto: Dogs, People, and Significant Otherness* (2003), *When Species Meet* (2007) and *Staying with the Trouble: Making Kin in the Chthulucene* (2016). Through these texts, I trace the components of a relational ontology based in practical experience to develop my theoretical framework in Chapter Five.

Relationships with other species require meeting places, and therefore I turn to anthropology to delineate its rationale for fieldwork and its relationship to creative endeavours (Ingold), and explore its specific application to interspecies encounters through a critical assessment of multispecies ethnography as a defined field of research during the last fifteen years (Tsing, Kirksey and Helmreich).

Finally, cultural presentations of relationships with insects are examined, informed by the work of posthumanist scholar Braidotti and anthropologist Raffles. This section demonstrates their usefulness as a subject matter to challenge anthropocentric attitudes to nature, provides context for my own response to fieldwork with moths, and brings the strands of philosophy, anthropology and entomological enquiry together.

3.1 Feminist philosophies of care and the environment

In 1990, sociologists Berenice Fisher and Joan Tronto presented a widely used definition of care as a "species activity concerned with the maintenance and repair of life within "our 'world'" (Fisher et al. 1990, 40). This capacious description was intended to widen the responsibility for care within human culture beyond professionals and informal or familial networks. Elsewhere, Tronto builds on Gilligan's 1982 feminist concept of the ethics of care to describe four key phases: awareness (caring about), responsibility (caring for), competence (ability to give care) and responsiveness (sensitivity to the responses of the care-receivers).

Tronto's tenets stress the importance of acknowledging the perspectives and specific contexts of those being cared for (Tronto 1993, 19). For Gilligan, care is an act of resistance to deterministic ideas of competition and patriarchy that create social inequality (1982), making it relevant to a discussion about environmental responsibility. Tronto's interpretation of care foregrounds the condition of relationship and the wider networks that facilitate this, drawing attention to uneven power balances within them. From a decentred perspective, it begs the question of how we define "life", "our" and "world".

In *Matters of Care* (2017) feminist academic Puig de la Bellacasa takes on Tronto's view of care as a state of being rather than a moral choice: care is "a series of vital activities" central to sustaining life (161). Her aim is to develop the ethical dimensions of the decentring critique within post-anthropocentrism as a series of "obligations" (13), to counteract a perceived reluctance (in the rush to flatten hierarchies and share agency with the more-than-human) to acknowledge responsibility (40). Rooted in the framing of female labour as both metaphor and material intervention, and to reunite intellect and emotion (15), Puig de la Bellacasa frames care as an informed activity and responsibility, both ethical and practical, which she extends to sensitive connections between different life worlds. Feminist care emerges as an embodied responsibility through relationships within difference, but expands to include collective, democratic decision-making.⁴⁸ Puig de la Bellacasa sees Tronto's definition of care as too human-centred (217). Her own focus is on how knowledge is produced: sensitivity to different situations may conflict with ideas about bias and equal treatment (2012, 198). Perhaps in response to Puig de la Bellacasa's criticism, Tronto later added a fifth step, caring-with; the development of trust-based collective and plural care practices.

Puig de la Bellacasa points out that the ongoing responsive sensitivity required from both the individual carer and receiver can be exhausting (2012, 212).

Asymmetrical relationships may indicate a system out of balance or lacking in support, and therefore open to abuse. Reflecting on exhaustion in my own experience of caring for my mother revealed how impositions of will based on power imbalances may arise (discussed further in 5.1.3) Chatzidakis et al. pick up

⁴⁸ Puig de la Bellacasa traces the origins of care-as-activism to feminist protests, such as against the military complex at Greenham Common in the 1980s.

on this feeling of something not being right in ongoing provisions for care. The outsourcing of care to informal unpaid carers and overworked undervalued professionals, as witnessed by recent discussions of care-home funding, shows how social care is annexed, marginalised and underfunded (BBC 2023). The debate therefore centres on the tension between individual agency and social structures that determine responsibility for planetary care, which provides the locus for much socially engaged and environmental art practice (discussed further in Chapter Four). van Dooren identifies three aspects at work in Puig de la Bellacasa's articulation of care: embodied affectivity, ethical awareness and practical action (2014, 291), acknowledging that her work builds upon foundations laid by two central thinkers on ecofeminist philosophy, Haraway and Plumwood.

Donna Haraway's writings inform two central strands of this research: the development of a relational stance within human/nature relationships, and the material and ethical implications of such companionship. Haraway's relational ontology, the philosophy that relationships between entities (rather than individuals themselves) form the most fundamental unit of life (2003, 24) builds on Margulis's discovery of symbiogenesis to demonstrate how differences in kind emerge from specific bodily interactions over time, and are not fixed categories.⁴⁹

Reacting to how science from the nineteenth century positioned itself as dispassionately revealing the constructions of the world, *Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective* (1988) replaces the notion of the omniscient observer with the subjective presence of the embodied researcher. Haraway intends to destabilise thinking that separates theoretical knowledge from complex reality, without losing sight of that very material experience. Her approach highlights the ethical implications of action, stressing localised biological reality and the usefulness of multiple perspectives. Haraway both articulates the value of "seeing from below" (373) and demands self-awareness of the situated researcher's own biases. The peripheral viewer is likely to be more alert to the limitations of the omniscient approach, through previous negative experience of being marginalised.

⁴⁹ "The relation is the smallest unit of analysis, and the relation is about significant otherness at every scale" (2003, 24).

An encouragement to insist on the value of my inconsequential-seeming subject matter, the text activates my argument that the role of the citizen-scientist-artist can be to dismantle disciplinary boundaries in order to re-engage alienated people with ecology and make their experience visible and valued. It also helped me to accept self-conscious involvement in the research and recognise autoethnography as a relevant methodological tool, explored in 5.2.2. I interpret Haraway's writing style as a creative manifestation of her concept of *Situated Knowledges*, articulated through speculative story-telling as a critical device.

My understandings from Haraway are drawn from three further key texts: *The Companion Species Manifesto: Dogs, People, and Significant Otherness* (2003) and *When Species Meet* (2007) illuminate ongoing transformation through interspecies relationships, arguing that sensitivity to these 'co-constitutions' allows new understandings to form. Finally, I appraise her synthesis of these ideas in *Staying with the Trouble: Making Kin in the Chthulucene* (2016), which informs my approach to decentred multispecies fieldwork as a basis for creative practice. The companion species concept developed from Haraway's earlier cyborg theories (1984), to counteract the human exceptionalism to which Haraway objects in posthuman configurations (2016, 13). *The companion species manifesto* (2003) celebrates 'biosocial' complexity, insisting on the material reality of Barad's intra-action, which states that, since we come into being through ongoing meetings, there are no separate pre-existing entities. Responding to this knowledge becomes an ethical obligation to care about the consequences of these meetings (50). Resonant with the companion object idea (which I coined before encountering Haraway), the concept provides a useful framework for articulating the often-disregarded agency of the more-than-human within environmental, social and cultural encounters.

Haraway outlines her concept of 'becoming-with' in further detail in *When Species Meet* (2007, 244). Unravelling her personal experience of dog-agility training, she traces global connections between humans, other species and environments to show their cascading impacts. By taking what might appear a marginal subject seriously, she asks us to care about it. At its simplest, 'becoming-with' defines interreliance with other creatures as an essential component of sustaining life, not in the vague sense that 'everything is connected', but within specific interactions and ecologies with consequences (31). It is not about assimilation. Choices must be

made, and remade in the pursuit of understanding (287). Framing ecological entanglements in terms of “living and eating well” underlines the importance of ethical choice, as eating requires killing (298). In developing the theme of *nourishment* through my fieldwork and practice, this ethical prompt helped me to reflect on what can be learned about longevity, adaptability and diversity from the moths’ need for specific food plants and ecological niches. Filtered through knowledge of escalating habitat loss and agricultural pesticide use, these understandings give rise to narratives that detail how ‘becoming-with moths’ is playing out in urbanised the UK (discussed further in Chapter Six – Practice).

To Indian environmental feminist Vandana Shiva ‘multispecies becoming-with’ could be read as collusion with the technoscientific work of bioengineering in her eyes. Shiva unites feminist and indigenous liberation with environmentalism into a single project, based on the resistance actions of subsistence on the land and consequent care for it, exemplified by the Chipko movement (1993, 12).⁵⁰ The subsistence economy does not need to produce a surplus and recognises the generative force of nature, which is seen as feminine and spiritual: *prakriti*, as something to be maintained (Shiva 1989, 38). Bringing back marginalised knowledges that have a reciprocal relationship with the land is her central focus, therefore she rejects Haraway’s emphasis on feminist theories of difference and the social construct of nature, as complicit with, or not sufficiently organised against, patriarchal capitalism (Lykke 1997).

While Shiva is perhaps idealising indigenous knowledge as it disappears, Haraway finds the idea of the mythological goddess figure as feminism’s riposte to patriarchy limiting, not recognising the present actuality of technoscientific enmeshment. Contrasting views within feminism between Haraway’s embracing of a cyborg future where technology is enmeshed with biology, and Shiva’s argument for the centralisation of female indigenous spiritual approaches to land care, echo the different viewpoints within conservation in terms of rewilding versus urban hybridity. Shiva is defending a way of living with the natural world in India that has been largely destroyed by Western capitalism and colonialism, while Haraway is perhaps writing from a culture where this has already been lost.

⁵⁰ discussed previously in section 2.3



Fig. 3.2: *Chipko Tree Huggers of the Himalayas #4* © Pamela Singh 1994

Puig de la Bellacasa (2012) recognises Haraway's key subject as the constant questioning of boundary constructs between individuals (201), summarising her position on situated knowledge as an innate condition of living amongst relational influences, rather than taking a moral stance on certain actions. It is a feminist political stance warning that universalist points of view simplify and ignore difference and may perpetuate paradigms of exclusion (198). However, Lechte (2007) claims Haraway does not detach enough from her assemblage of science, advanced theoretical ideas and political analysis to externalise specific knowledge. He suggests that she adopts a transcendental poetic flair to avoid commenting on the knowledge revealed within that situation, seeing this as the binary opposite of situatedness. This is surely Haraway's point: to demonstrate an alternative to extractive knowledge isolated from its context. Lechte also finds it contradictory that she employs the very tradition of science in which she is trained to critique its ways (337). This betrays a desire to return to the singular, empirical ways of thinking she critiques, as her intimate knowledge of biological evidence gives her perspectives weight. Haraway's original field of primatology, deeply embedded in evolutionary thinking, was structured on self-referential human ideologies of

hierarchy: ape subjects defined by what we think they are *not*, reveal what we think we *are*. The importance of recognising the cultural framing of the stories we tell ourselves – of what might constitute knowledge or understanding – is one of her refrains (2014). Haraway underlines that we already live inside constructed narratives (of science, gender, technology) that we mistake for singular ‘truths’. For her, the Anthropocene is one such story: it both re-centralises humans in the environmental narrative, and alienates them in the face of overwhelming change. The emphasis on scale discourages engagement with the more-than-human forces unleashed. Latour disagrees, thinking that the *anthropos* term somehow helps to “disaggregate” the universal idea of Man (2017, 109).

Staying with the Trouble (2016) presents Haraway’s counter-narrative to the Anthropocene. To live in the complexity of the present, rather than project technical solutions into the future, involves recognising the rights of all living beings who constitute that present. Her Chthulucene concept dissolves species boundaries to embrace the powerful life force of the more-than-human. Survival is a hopeful process of living with multiple differences. This involves widening the notion of family or ‘kin’, with its attendant burdens of care and love, to include diverse living assemblages (162). This is more than a metaphor for Haraway the biologist, who, mindful of horizontal genetic transfer, imagines the generational emergence of interspecies co-mingling in the *Camille stories* (2016, 134–168). Mutual collaboration dissolves ideological boundaries between contrasting ways of life, as a principle necessary for “ongoingness” on a damaged planet (132). Feminists interpret Haraway’s notion of kinship as challenging the narrow genetic ideas of inheritance, and the responsibilities that go with it, to activate care beyond the parameters which often absolve wider society from such labour (Klumbyté 2018).

To some social scientists, Haraway’s focus on the more-than-human assumes co-operation without approaching how conflicting versions of reality can be resolved. *Staying with the Trouble* has been criticised for avoiding the complexities of class, race, power and other forms of social inequality. Her lack of specificity about how to negotiate all these ‘becomings’ falls short of fully addressing the inequalities she is so alive to (Bacevic 2017). I agree that, when examining specifics, her examples can be contradictory. The ‘trouble’ with multispecies activities is that you cannot gain explicit permission from some participants. Haraway celebrates

the joining of citizen-science and art activism in the PigeonBlog (2016, 21) but sidesteps whether the birds consent to participate. A subsequent example celebrates a specially-designed loft in an Australian park that encourages pigeons to lay eggs so that they can be removed – the structure is a birth control device. Claims of co-production with the more-than-human (often made with the best of sustainable intentions) risk instrumentalising their living partners – mycelium, or plants – mistaking their biological agency for collaboration.

The problem of reciprocity troubled my fieldwork, giving rise to outputs including the video *Nourishment* with spoken word text, and the collaborative moving image piece *Towards Light* (discussed in detail in Chapter Six). While interaction with moths profoundly influenced this human, it is difficult to see those not inhabiting our wardrobes and pantries as involved in a directly responsive relationship. They do not pollinate *for* us. In my creative writing for this research I recognised the separateness of moths, even as I became more sensitive to the conversations between our life worlds, and the mostly negative effects of humans on theirs. Of course they have agency – it is just not directed at us. The crucial theme of difference that Haraway stresses led my practice to highlight personal interactions with individual creatures. This came to focus on instances of damage, clumsiness and unintentional violence that emphasised the unequal power relationship between us. Bacevic (2017) is right that the elephant in the room is competition: conflicting ideas about needs, rights and access to the necessities of life are being lived out in the scramble for planetary resources, space and control that characterises late capitalism. While conservation is a core interest of Haraway's, in rebalancing the evolutionary debate that overemphasised competition in the past, there is a danger of sidelining the specific critical polarities that are driving species decline now. In addition, Gandy suggests that posthuman and new materialist discourses are sometimes in danger of indulging an "ahistorical" neo-vitalism, and avoid addressing pre-modern animistic relations with animals (2019, 397).

Haraway's layered and allusive writing style is an irritant to some, who find its tone utopian (Hansong 2020). I read it as a deliberate attempt to model relational understanding. Acknowledging the more-than-human contributors to her thinking, and those outside the academy, recognises equal authorship status for the wider multispecies community she champions. It is useful to see Haraway's

layered prose in terms of creative rather than academic writing. She does not suggest her 'speculative fabulations' are *the* story, but uses them to show what stories are. Science fiction is her conceptual vehicle to encourage a long term ecological perspective. An imagined future of deeply co-mingled DNA is a provocation to embrace what living together means in the present. I read her as an artist who supplies images and language for thinking differently, rather than suggesting practical solutions. In my own work, she has been useful in clarifying a critical reading of the history of natural history with its knowledge built on voucher samples, hunted species and hierarchical taxonomies. I counteract these with narratives of personal engagement with individual living entities. However, my fieldwork has led me to value ideas of territory, separation and space, which can be approached through the concept of rewilding. In contrast to Haraway's co-mingling, creatures that have not been co-opted to the human project simply require the absence of human interference in order to flourish. Paradoxically, in the Anthropocene, this initially requires remedial labour by humans, to prepare the groundwork for the more-than-humans to re-establish.

If it were possible to distil Haraway's four texts into a single message, it is to navigate complexity in the battle against "human exceptionalism" without falling into relativism (2008, 295). Recognising the fundamentally different apparatus of species while maintaining empathy is the central challenge of a decentred perspective. Haraway's 'multispecies becoming-with' is persuasive, not as an act of will, but of surrender, which involves making choices about what to embrace and what to give up. Ecologically, it signals shrinking human impact on habitats and regenerating them where necessary to encourage as much diversity as possible, signalling a deeper engagement with conservation, and its problems of reasserting control, as a concern in ongoing creative practice. I only want to 'become moth' enough to understand their way of being, and let them flourish.

Val Plumwood presents the ecological crisis as profoundly cultural. Arguing for a socio-cultural reset at scale, she seeks to dismantle the anthropocentrism that originated in the rationalist split from a more holistic approach to science (2002, 50). Plumwood outlines a three-pronged approach that extends ethics beyond human subjects alone. First, liberal democracy is critiqued for its mistaken

emphasis on individual autonomy. This can be remedied by adopting the key feminist stance that validates the labour carried out by invisibilised others to support life. Thirdly, she advocates a 'weak' anthropomorphism that recognises the personhood of beings beyond-the-human, drawing on indigenous ontologies of reciprocity. Plumwood's ethical argument is based on reintegrating responsible care into scientific endeavours. Neoliberal capitalism maintains an extractive distance from nature, driven by a belief that human fallibility can be transcended (97). Consumer cultures focus on individual fulfilment reliant on technological solutions, forgetting that human life is enabled by a web of support from more-than-human, material and physical agencies (19). The dualism that defines nature in terms of opposition to humans, and therefore as lacking culture, incorporates patriarchal ideas. Such views cast nature, women and marginalised others as passive (15). Recognising "relationships of care, sympathy and engagement" within environments can reconnect subject and object to overcome this separation (43).

Braidotti (2013) recognises Plumwood's central contribution as framing debate on the ethics of interspecies relationships through this unpicking of assumed privilege. In developing a theory of feminist citizenship, McGregor (2006) builds on Plumwood's foundational critique of liberal democracy as sidelining communal environmental care duties in favour of an emphasis on self-determination. She believes Plumwood does not sufficiently address the embedded inequalities that remain within some environmental movements themselves, however (McGregor 2006, 8). Division of labour frees only some to access participation in 'green lifestyles' or environmental activism. The movements could challenge value hierarchies by more robustly foregrounding "the relations of dependence" that are a key tenet of feminism (10). The increasing burden (of trying to be green under conditions of inequity) may also actually reinforce neoliberal agendas that minimise the role of public provision. Instead of promoting the language of care and intimacy, McGregor finds it more useful to move the discussion into the arena of public political debate. Chatzidakis et al. (2020) focus on such political and democratic expressions of both social and environmental care. They argue that lack of communal care is a deliberate component of capitalism; the cultural system does not recognise care as an organising principle. As attitudes of carelessness

result from the erosion of public and community autonomy, they, contra McGregor, articulate the need for a ‘vocabulary of care’ (2020, 4) to make public discourse easier and more visible, and so counteract the individualism of neoliberal mindsets.

It is easy to present the language of care as a weak tool with which to withstand social, industrial and political forces that degrade environments. Political activism is urgently required in a society where ecoliteracy is presented as an individual undertaking, akin to sustainability greenwashing, which simply encourages people to ‘consume better’. Conley describes a “care of the possible” that prioritises experimental collaborative approaches rather than individual profit motives (Conley 2016, 339). Critical creative practice can interrogate how and why nurturing has been sidelined in the first place, and broadcast alternative views. It can also develop visual vocabularies that validate the more-than-human as in its own terms. These narratives feed into social consciousness and influence public debate.

The key question for Puig de la Bellacasa in applying ‘thinking with care’ (2012, 207) to ecology is how to develop relational cultures of care in light of such divergent yet interdependent lifeworlds. In expanding this concept to encompass more-than-human care, Puig de la Bellacasa, building on Haraway and Plumwood, highlights the ethical dilemma of how to avoid projecting human values, while still engaging with the practical business of co-existence (127). She is concerned, with Wolfe (2010), that decentring the human can lead to an abnegation of ethical responsibilities, as if these were a choice rather than an integral part of living-in-relationship. Her work has been criticised for highlighting boundaries within narrowly-defined posthuman discourse, without paying sufficient attention to the details of justice in the distribution of care – essentially the practical application of her ideas in real world scenarios (Samanani 2019). As with Haraway, this is a common criticism of environmental philosophers by social scientists. While this may be justifiable considering the boundary dissolution both writers advocate, it is nevertheless not the focus of their scholarship or expertise.

Charges of anthropomorphism arise when discussing more-than-human communication using human language – it is a problem of translation “across irreducible difference” (Haraway 2003, 50). Plumwood is sceptical of objections that delegitimise anthropomorphism as presuming to ‘speak for’ others; she sees

these as designed to facilitate exploitation. Based in *anthropocentrism*, which assumes that only humans have sentient agency, they reinforce separation and shut down the attempt at empathy. For Plumwood, the urgency of rebuilding relational ontologies trumps this danger. If aware of its pitfalls, such as when presenting different lifeworlds as equivalent, it is useful. Rather than expanding the circle of inclusion through legal arguments, she deconstructs assumptions of “sameness” to avoid a return to dualist attitudes (2002, 168).

Anthropologist Deborah Bird Rose (2013) connects Plumwood’s philosophical animism, a drive to inhabit relational environmental ethics, to their shared experience of learning with indigenous Australians. Reclaiming the concept from nineteenth-century anthropology that used separation as a marker of civilisation, animism recognises the personhood of all living entities, is alive to the essential relationships involved, and does not separate humans into a different category. Western squeamishness tends to misunderstand animism as the projection of human-specific characteristics onto others, rather than the removal of a barrier. Plumwood recognises the sentience of other beings experientially, as an entry point for communication across difference (rather than creating theories of mind, as Bateman and Nagel do), drawing on Australian indigenous teaching, where selfhood is a node within community, a recognition of being among many. Culture is a way of life which includes knowledge production, and indigenous cultures integrate the sensory signals of the more-than-human within a value system that acknowledges a debt of gratitude to the environmental relationships that support life. Ways of life described as indigenous are characterised by a stewardship of local resources because they are essential to the community’s survival, rather than for altruistic or recreational reasons (Guha and Martinez-Alier 2013 [1997]).

In *Braiding Sweetgrass* (2013) Robin Wall Kimmerer plaits together her indigenous cultural knowledge, her scientific training as a plant ecologist, and a post-anthropocentric view that foregrounds the knowledge within the plants themselves (such as their remediating actions on the soil). Braiding is an act of care that unites the three approaches towards a more nuanced, reciprocal with more-than-human entities, especially when making use of their properties. Her indigenous perspective rejects the constructed hierarchy that grades lifeforms in order of perceived importance, and communicates a non-extractive attention, as

when harvesting for example, which respects the abundance in nature to counteract myths of scarcity. Kimmerer embodies the alliance of science and creative writing discussed earlier in relation to Haraway. She uses her scientific discipline from within to break open the very method, demonstrating its limits and constraints, to draw attention to knowledge practices that have been marginalised. To apply the principle of the “honourable harvest” to scientific data collection Kimmerer suggests an indigenous methodology that asks permission from those being gathered from, respects the more-than-human knowledge holders on their own terms, and acknowledges the gift given by reciprocating in some way. For citizen-science moth recording, this might encompass the responsibility to pass on diligently collected data, ensure minimal harm in the process of collecting, but also act on the data. This could be through engaging in activities to regenerate habitat or to communicate what is learned more widely through creative practices which harness emotional subjectivity and lived experience as ways to strengthen the bonds between responsibility and knowledge.

Creative practice is well placed to unpick cultural narratives and point out connections that promote ecological literacy. With Haraway, Plumwood championed creative writing (as does Kimmerer), specifically to break open objections to sentimental anthropomorphism as an empathetic tool to make the animating sensibility more visible (2007, 17). I take up the challenges of using critical anthropomorphism as a creative framework more fully in 5.1.

Feminism via Haraway uses specific subjective experience to counteract the biases embedded within dominant views presented as objective, pointing out how they allow othering and exclusion. Feminist new materialism insists that cultural constructs of knowledge cannot be separated from their material consequences. Therefore nature is not an object, or only a cultural construct. The material turn challenges scientific and cultural dualism to adopt a more ethical stance, stressing the political agencies of material and bodies (Coole and Frost 2010, 9; Dolphijn and van der Tuin 2013, 22). While constructionist views highlight the relationship between matter and discourse, they can promote an unethical relativism. Human actions are influenced by culture, but the more-than-human also acts, often in unpredictable ways (Sheldon 2015, 202). Meaning comes into being between ideas, actions, and matter (Barad 2003). By drawing attention to energy flows within

systems as an intrinsic part of understanding the forces at work in the Anthropocene (Bennet 2010), these ideas highlight the bioethical implications of human actions within, and constructions of, the environment while simultaneously displacing them from the centre. Sheldon argues that opposing philosophies such as object-oriented ontology (which isolate the object and its agency, sidelining the role of culture), deliberately misconstrue feminist new materialism as an argument for the constructivist view (2015, 205). However, her view is that Bennet's vital materiality becomes distracted by the multiplicity of disparate agents involved and loses sight of fully examining their potential as conjoined energy.

In using moths to enquire into how environmental assemblages both materialise and experience the living world as self-constituting, my research reflects on the overlooked practices of more-than-human world-making. Feminism is intimately connected with conceptions of nature, as women's bodies, marginalised peoples and wild entities have been characterised historically as existing in an innate, primal state beyond culture. This is a patriarchal construct, used to justify violence and inequity. Feminist new materialism both challenges an obsession with individuality, and engages with knowledges that exist beyond human language and representation. Human agency exists only because of, and in combination with, more-than-human entities. The agency of moth bodies within the environment is both underestimated and taken for granted; revealing their physical activities is important, not least to correct assumptions about the workings of biological assemblages, but also to counteract mechanistic narratives of environmental services. Moth recording opens a portal into the responsiveness of dynamic populations to environmental change. Pulses of expansion, dispersal, migration and reproduction connect with variations in weather conditions, sustenance, exposure to pollutants and opportunities for adaptation. But misreading these energies as merely cause and effect underplays the agency of the organisms themselves. This explodes ideas of human singularity, providing a new way of thinking about humanity's response to the ecological emergency.

3.2 Anthropology and Multispecies Ethnography

3.2.1 Anthropology

The interdisciplinary nature of environmental humanities scholarship is intimately connected with anthropology, partly through a critical approach that includes decolonisation studies, but also through the development of sensory and creative, or multimodal approaches to research (Pink 2009).

Tim Ingold describes anthropology as “philosophy out of doors” (2008, 83), underlining his experiential approach to understanding, and questions the traditional disciplinary boundary that separates qualitative data gathering (a narrow view of ethnography) from its theoretical analysis. Dominated by deterministic evolutionary attitudes, the original project of anthropology used comparisons between different societies to generalise and ultimately distil universal truths about humanity. Ingold reimagines anthropology as an active, sensory process of dialogue within environments, rather than a construction that happens in withdrawal. For him, the characteristic comparative attitude of anthropology should be read as a mode of curiosity, attentive to the multiple co-existent ways of being among whom the researcher walks. Resonant with the environmental philosophies outlined above, this immersive stance focuses on embodying understanding, rather than extracting knowledge. Casting anthropology as an inherently relational process, Ingold prefers to see societies (as Haraway does organisms) as processes of becoming in conversation with each other, rather than bounded entities. One bounded entity Ingold wishes to dismantle is ‘the field of enquiry’ as separate from the researcher’s own life. Instead, he centralises the “sideways glance” – the shifts of perspective, that may encompass dreams, informal conversations and peripheral practices, that inform research (87).

Elsewhere, Ingold characterises the relational process as wayfinding (2000). Wayfinding differs from plotting a pre-planned course from A to B with a map (or design framework).⁵¹ The wayfinder feels their way through a landscape or “field of

⁵¹ “To use a map is to navigate by means of it: that is, to plot a course from one *location* to another in *space*. Wayfinding, by contrast, is a matter of moving from one *place* to another in a *region*” (Ingold 2000, 219).

relations”, constantly adjusting to sensory cues; a map looks the same anywhere (220). This is useful for a research process aiming to decentre the human, emphasising as it does immersive attention to the present, and the need to relinquish preconceived ideas. However, some anthropologists find Ingold’s phenomenological emphasis on direct perception reductive. Ingold is both “pre-cultural and post-social” according to Howes, not sufficiently acknowledging his own cultural conditioning, or taking into account how culture mediates our sensory perceptions (2022, 448). For Howes this presents a highly individualist interpretation of sensory experience, which nevertheless endorses a normative Eurocentric privileging of vision. The idea of the map universalises ‘vision from above’ in the way that, for Haraway, was attempted by science in the modernising project of the early twentieth century, leading to injustice and environmental exploitation. For Ingold, a map is an artefact or performance, constructed after the experience to help tell the story, rather than a single representation of any place. It is therefore subjective. Bateson characterised this in terms of selectivity: “[w]hat gets onto the map... is *difference*” (1972, 453).

Ingold recognises that anthropology and art share a “sensibility to the strange in the close-at-hand” (2008, 84). Ethnography produces descriptions of different ways of seeing and being in the world through direct observation and experience. For Ingold, this is a creative practice in its own right, although Howe points out Ingold’s poor view of projects that use ethnography to combine art and anthropology! (2022, 447). Pink explains this by finding that semiotic art practices are incompatible with the ecological psychology and phenomenology which underpin Ingold’s approach (2011). I experienced this in my own work, and discuss it further in 5.2.3. While outlining how multisensory ethnography has very much built on Ingold’s opening out of the field of perception in anthropology, Pink prefers participant sensation, rather than observation (455), an approach interested in communicating “synergies” across different modes or senses, rather than reproducing binary oppositions (267).

This research does not attempt to be a work of anthropology. However, Ingold’s refusal to separate theory and method, together with dissolving of the field, became highly relevant in my practice methodology. Employing an ethnographic approach to my encounters with moths helped me to make sense of the circular

nature of reflective practice, and to recognise the value of creative writing in its own right, as part of an expanded practice. However, I take on board Howe's warning of the potential for self-indulgence in not positioning one's output within a sufficiently acknowledged social and cultural context.

Anthropologist Anna Tsing describes how the sensory pleasure of frequenting marginal places ignored by humans opens the way to "appreciation for multi-species interactions" (2012, 142). Margins indicate the buffer zones between different life modes, and as such, draw attention to their contrasting guiding principles – their cultures. Unlike Howe's criticism of Ingold, Tsing includes politics and culture (migrant workers, global supply chains) in her investigations of the diversity within landscapes (2015). Where Ingold focuses on how knowledge is internalised through personal sensory perception, Tsing illuminates the connections of mutual dependence themselves. Building on Haraway's acknowledgement of biological intermingling, Tsing accentuates the potential of an interspecies lens to suggest "cultural research trajectories" (2012, 144). Tsing's tools for a decentred perspective turn sensory awareness outwards towards interactions among multispecies assemblages themselves, not just with humans (2020, 19). Aware that recognitions of multiplicity can still be anthropocentric, she respects, with Plumwood, the animism of some pre-industrial ontologies, and the need to develop a "place-sensitive culture" (Plumwood 2002, 239). Here Tsing recognises the specificity of local entanglements that produce abundance, celebrating how foraged mushrooms are 'not laboured for' in a way that resonates with Kimmerer's work on indigenous harvesting, gratitude and the gift⁵² of free sustenance from nature (Kimmerer 2014). Tsing, along with Eduardo Kohn, is an early pioneer in the field of multispecies ethnography. Kohn first called for anthropology to move "beyond the human" in 2007, outlining how semiotic communication exists in more-than-human contexts in the Amazon. Kohn advocates recognising equal status for other life-forms in an expanded cultural field of multinaturalism, that recognises a plurality of understandings of, and relations between, living organisms within ecological assemblages (2007, 2013).

⁵² In her native potawatomi language, the word for berry also means "gift". Robin Wall Kimmerer, "Braiding Sweetgrass" (Live talk at University of British Columbia, 16 February 2021 online).

3.2.2 Multispecies ethnography



Fig. 3.3: Jersey Tiger (*Euplagia quadripunctaria*) caterpillar second instar moulting. 26 April. Katherine Pogson 2021

Kirksey and Helmreich defined the concept of multispecies ethnography in 2010 as placing “a fresh emphasis on the subjectivity and agency of organisms whose lives are entangled with humans” (566). Ogden et al. recognise the “partially knowable... emergent... contingent” nature of such research (2013, 6). Extending the boundaries of anthropology to include relationships with the more-than-human, multispecies ethnography seeks to challenge the nature/culture divide by embracing post-anthropocentric concepts (Locke and Muenster 2015). The methodology is reflexive, not just revealing the diversity in ‘biodiversity’ but challenging categorisations that risk reverting to the binary divides it challenges.

By “unsettling” fixed species boundaries (van Dooren et al. 2016, 1), multispecies ethnography renews the philosophical implication of symbiosis in evolution discovered by biologist Lynn Margulis (1971). Mutual relationships between organisms lie at the very heart of our mitochondrial DNA, making humans into

‘symbionts’ (organisms in symbiotic relationships). These developmental ideas have gained philosophical traction in biology over the last century, challenging the competitive metaphors frequently applied in discussions of evolution. Haraway calls this “multispecies-becoming-with,” a feminist notion that suggests closer interspecies co-operation as a way through the ‘trouble’ of the environmental crisis. Co-reliance, or companionship, is a key theoretical concept for this research.

Multispecies ethnography is avowedly multidisciplinary: from its earliest inception at the Multispecies Salons on the fringes of the American Anthropological Association (2006-2010) “Art served as a companion and catalyst practice for thinking through and against nature-culture dichotomies” (Kirksey and Helmreich 2010, 546). Seventeen artists using bioart,⁵³ technical and ecological approaches presented works with geopolitical, medical and sensory themes. The 2008 exhibition moved beyond questions of who flourishes and who fails in the human-dominated world to focus more on the agency of ignored or deprioritised biotic life, such as viruses and cockroaches. The use of the word ‘companion’ by Kirksey speaks not just to the interest in relational ontologies, but highlights the importance of collaborative approaches from the outset.

Simone Dennis (2022) suggests that multispecies research tends towards a romantic view of relationships with animals in the wild, and that entanglements in laboratories present a rich and more challenging subject area. Smart (2014) made a similar point: that the turn away from technical posthumanism evades engaging with the critical role of mechanical apparatuses in human-animal relations. The linked field of environmental justice continues to produce many overlaps with multispecies ethnography, however. Pioneers such as Tsing have investigated industrial pig-farming in Denmark (2016), and initiatives such as *More Than Human Rights* (2024) with the wonderful acronym MOTH⁵⁴, are bringing ecological justice debates into closer dialogue with arts practice and science through conferences, publications and activism, to embed human rights within the larger context of integrated rights to life for all earth-dwellers.

⁵³ artistic practice working with living organisms and biological processes.

⁵⁴ <https://mothrights.org>

In criticising ecological literature, Ursula Heise (2016) distinguishes two strands within multispecies justice: animal rights activism and environmentalism. While both are involved in a critique of the domestication of nature, each privileges different kinds of species, such as the wild over the feral or farmed. Animal rights focuses on the individual suffering of animals, in a way sometimes seen as sentimental, and works to complete equality by bringing other life-forms within legal frameworks. Environmentalism works at species level on a restoration project to undo human damage to environments, such as by the selective removal of predators. For Heise, the difference between multispecies ethnography and environmental justice is an explicit acknowledgement of power differentials. Multispecies ethnography advocates an ontology of mutual human and more-than-human relationships as the basis for cultural change, whereas environmental justice focuses on mechanisms of power; political activism rather than ways of thinking and being (198).

Multispecies ethnography contributes two concepts towards the justice debate. It brings the more-than-human into the arena of concern, and questions the underlying assumptions on which discussions about 'justice' might take place, asking with Haraway, 'who benefits when species meet'? Highlighting how interspecies interactions shape cultures can influence discussions on policy, or disputes over access and rights. This underlines the project of environmental literacy as a cultural one, and the focus of this research. Multispecies ethnography as a method for arts practice expands ways to cultivate and communicate "mutual flourishing" (van Dooren et al. 2016, 17).

In this research I combine the immersed attention of multispecies ethnography with autoethnographic reflection to critically deconstruct what being 'inspired by nature' might mean for creative practice in an ecological emergency. Lived experience in an environment casts doubt on unifying theories which simplify 'nature'. Applying the research to practical ends is part of the multispecies manifesto, to develop an ethical stance, placing accountabilities hand in hand with the pursuit of knowledge. In my practice, the light trap events become a series of encounters with ethical questions at their heart. I question not just the impacts of my actions (holding the moths captive, albeit briefly, exposing them to danger from predators, heat, exhaustion and my own ineptitude) but also how far the

knowledge gained really helps the creatures. Justifying interventions as conservation practices while using them for my own artistic purposes, conveniently prioritises my curiosity over their safety. These concerns are discussed in Chapter Five, and developed through the practice in Chapter Six.

3.3 Insects

Rosi Braidotti writes compellingly of the paradigmatic qualities of insects; the speed of their reproduction, the strange physicality of their metamorphosis, and their close association with parasitism present an otherness that has become a symbol for the alien, severely challenging human empathy and identification (2002, 149).⁵⁵ The alienation experienced by Gregor in *Metamorphosis* (Kafka 1915) exemplifies the fear and disgust inspired in some human cultures by insects. Gregor becomes a sacrificial scapegoat for his family, embodying their projections, and enduring their least ‘humane’ actions. In popular culture, insects evoke ideas of the robotic swarm, where individuals lack supposed ego but, working together as a ‘hive mind’, present sophisticated organisational skills and can act as a unit. As such, insects provide a key provocation to anthropocentrism, and a useful tool for decentring the human within ecological assemblages.

For Braidotti, rather than being a metaphor for the machine, with its lack of feeling and capacity for endless labour, the “radical otherness” of insects is a bodily fact that presents an extreme challenge to human models of how consciousness is constructed (149). Building on the feminist material turn that emphasises the sensory, hybrid and phenomenological aspects of existence (Dolphijn and van der Tuin 2013, 22), she extends political discussions of embodied and situated experience to insects, to highlight power relationships between different bodies. Drawing on Deleuze and Guattari’s concept of ‘Becoming Animal’ (2003 [1988], 232), Braidotti sets up the insect as a provocation for embracing possibilities of biological and material difference that can enlarge understanding. The ‘other’ is a force that challenges subject-object relationships to point to multiple possibilities of being, never fixed, in affinity with others. The aim is to recognise the existence

⁵⁵ Insects are a numerous class of arthropods, often winged, with exoskeletons, segmented bodies and three pairs of jointed legs.

of capacities to think and act that humans may not possess. Jussi Parikka also challenges reductive assumptions of the swarm as pre-programmed or robotic. *Insect Media* (2010) homes in on the communicative power of the hive to investigate a more sensitive analysis of complex systems of technology as both embodied and distributed. This fusion of the ‘natural’ and the technical in an emergent, distributed intelligence places greater emphasis on the role of cooperation within the community. While both authors protest against the use of insects as metaphors to shed light on the human, I suggest these approaches, while certainly deconstructing habitual views of insects, nevertheless instrumentalise them in a different way. My research concerns how far it is possible to understand the more-than-human on their own terms, in order to better live alongside them.

Approaching the subject of insects ‘on their own terms’, anthropologist Hugh Raffles claims defeat early on. Raffles shares with Braidotti a desire to orient animal studies away from its reinscription onto human behaviour, and instil “a sense of humility” towards knowledge construction. The idiosyncratic alphabetic order of *Insectopedia* (2011) comments on the futility of taxonomy as a way of fully getting to know the more-than-human.⁵⁶ Raffles’s structure highlights the selective logic of organising concepts into hierarchies – the huge diversity of the category ‘insect’ renders it relatively meaningless. Raffles was drawn to the indifference of these creatures. Direct communication is impossible. The compound lens refuses eye contact. They are undomesticatable.⁵⁷ For him, the autonomy and independence of insects consistently undoes the basis of human knowledge projects. Such defiant properties are useful for decentring human knowledge paradigms. Raffles’s ethnographic research included contracting malaria in the Amazon. However, his most revealing method emerged through an indirect route: close study of other humans who work intimately with and relate to insects in diverse ways. A recurring finding was their unstable relationship with existing hierarchies. For example, in *Air* (2011, 10), insects call into question the idea of ‘place’ as something fixed and stable. Winged creatures easily challenge concepts of borders and control. Their vertical dispersal in the air column and opportunistic transportation among freight (or on the bodies of others) undo static notions of

⁵⁶ Entries begin “Air, Beauty, Chernobyl”.... and end “Ex Libris, Yearnings, Zen” (Raffles 2011).

⁵⁷ Although subjugated for silk production and industrial-scale pollination.

territory. In my fieldwork, responsiveness to temperature and rainfall fluctuations made them important indicators of change. The theme of 'place' highlighted the necessity of specific sustenance for different species, and how the destabilisation of this causes migration. I was struck by the intimacy of the violence deemed necessary for the co-production of knowledge in so many of the scientific relationships with insects identified by Raffles. Jean-Henri Fabre cut off the antennae of male Peacock moths *Saturnia pyri* when researching their attraction to the female (56). Karl von Frisch varnished over the eyes of the bees (171). Unintentional violence became a preoccupation in my own reflections and a theme within writing, developing tensions between care and control.



Fig. 3.4: Soft bug (*Miridae*) collected in 1988 near the nuclear power plant Gösgen, Switzerland, with partially irregular facets and a large lump growing out of the left eye. Hesse-Honegger and Wallimann, 2008.

Disturbance of hierarchies is demonstrated clearly in the chapter *Chernobyl* (15). Raffles examines what is revealed through the convergence of art and science by scientific illustrator Cornelia Hesse-Honegger (figure. 3.4). Trained in zoological image-making, the artist paints deformed bugs from nuclear sites. The meticulous accuracy of her paintings of mutations began in the laboratory, recording genetic experiments using radiation. The neutral accuracy of the presentation style – flat

graphics of isolated organs on a white or grid background – draws attention to the clinical approach of scientific close observation, which remains removed from its subject. Part of a wing grows out of a compound eye. They are not portraits, however the works emphasise individuality through unique deformations. The paintings present empirical ‘data’, and yet the process of accessing the nuclear power stations and gathering individual specimens is highly emotional. Sometimes painting brings on a sense of bodily remembering where the artist feels physical manifestations of the mutations herself. It is an act of witnessing (21).

Hesse-Honegger’s scientific community found her collection methods unscientific and her findings inconvenient, echoing the battles of earlier female naturalists. In the art world, she was either too technical or lacking in criticality. Although based in a long tradition of close observation of nature, her mode of attention challenges disciplinary gate-keeping, especially when ethical questions are pressed. However, their impact beyond the academy due to media exposure was significant in raising popular concern. Empathy involves elements of anthropomorphic projection.

As an anthropologist, understanding humans is Raffles’s job description. It is impossible to completely avoid the self-referential aspect of animal studies. But insects present “the limit case for anthropomorphism”.⁵⁸ Even so, these limits, such as extreme differences in morphology, can usefully disturb human assumptions about our own bodies. Contemplating the unknowableness of insects leaves one with the human experience of an encounter, which is culturally charged. For Braidotti, thinking with insects points out the deficiencies of our own physicality and our understanding. Paying attention to insects creates a sensitivity to differences of scale, temporality and distributed agency for Parikka, the basis of a more ethical relationship with the world and those who make it. Where Tsing works to make the assemblage itself visible, Raffles studies experts to see what diverse knowledge might emerge through their long relationships with insects. I share his desire to draw attention to the requirements for flourishing of insects on their own terms, rather than to highlight the assemblage as an end-point. The withdrawnness of moths confounds anthropomorphism, while highlighting

⁵⁸ Raffles, Hugh. “Political Entomologies” Seminar (online). University of Cambridge. 15 March 2021.

connections can easily revert to an anthropocentric interpretation. Relationality always involves an element of anthropomorphism.

For creative practice, the decentring urge navigates this tension: how to reveal insects 'on their own terms' while foregrounding relational attitudes. Three central concerns relevant to my practice arise from these writings. Communicating what is learned through close relationships, a conscious use of anthropomorphism, and a commitment to dismantle outmoded disciplinary and cultural boundaries. In terms of creative writing, I came to focus on relationships with individual insects through a sense of obligation. Intimate relationships with moth progeny led to the development of the diary form as an approach to creative practice (discussed further in Chapter Six).⁵⁹ Individual stories of intense involvement serve to rebut attitudes of triviality, a common initial response to this subject matter. To create affinity, and to feel personal responsibility, leads to acts of care. Care, and its tension with control as a human problem addressed by a decentred approach, became a theme for reflection during this research. The potential for the amateur to be a decentring force in citizen-science arose as a key idea: a way of both undoing professional gate-keeping of knowledge, and expanding the methods and applications for fieldwork beyond data-gathering alone.

Chapter summary

Chapter Three has examined now applying feminist approaches to care to more-than-human relations foregrounds responsibilities within unequal power relationships. Such notions challenge professional boundaries between disciplines to present caring responsibilities as both cultural and communal. Feminist relational ontologies advocate ways of being in the world that dismantle anthropocentric ideas of mastery over nature, while multispecies ethnography suggests practical ways to apply a decentred human approach to ecological fieldwork. I have delineated specific properties of, and stereotypes about, insects to show why my study of moth-recording provides fruitful groundwork for an ecologically-engaged creative practice. Together, these theories provide a critical apparatus on which to develop a conceptual framework for an expanded practice that prompts a multispecies sensibility, outlined in detail in Chapter Five.

⁵⁹ Hesse-Honegger's field diaries also form part of her exhibited work.

Creative practice can disseminate ecological understandings beyond the didactic or information-based confines of scientific scholarship, to communicate with empathy, feeling and connection. Multispecies ethnography provides an entry point to a more detailed analysis of the work of creative practitioners who engage with the more-than-human, and therefore I have chosen to discuss craft and visual arts practice and practitioners together in the following chapter.

Chapter Four – Practice contexts

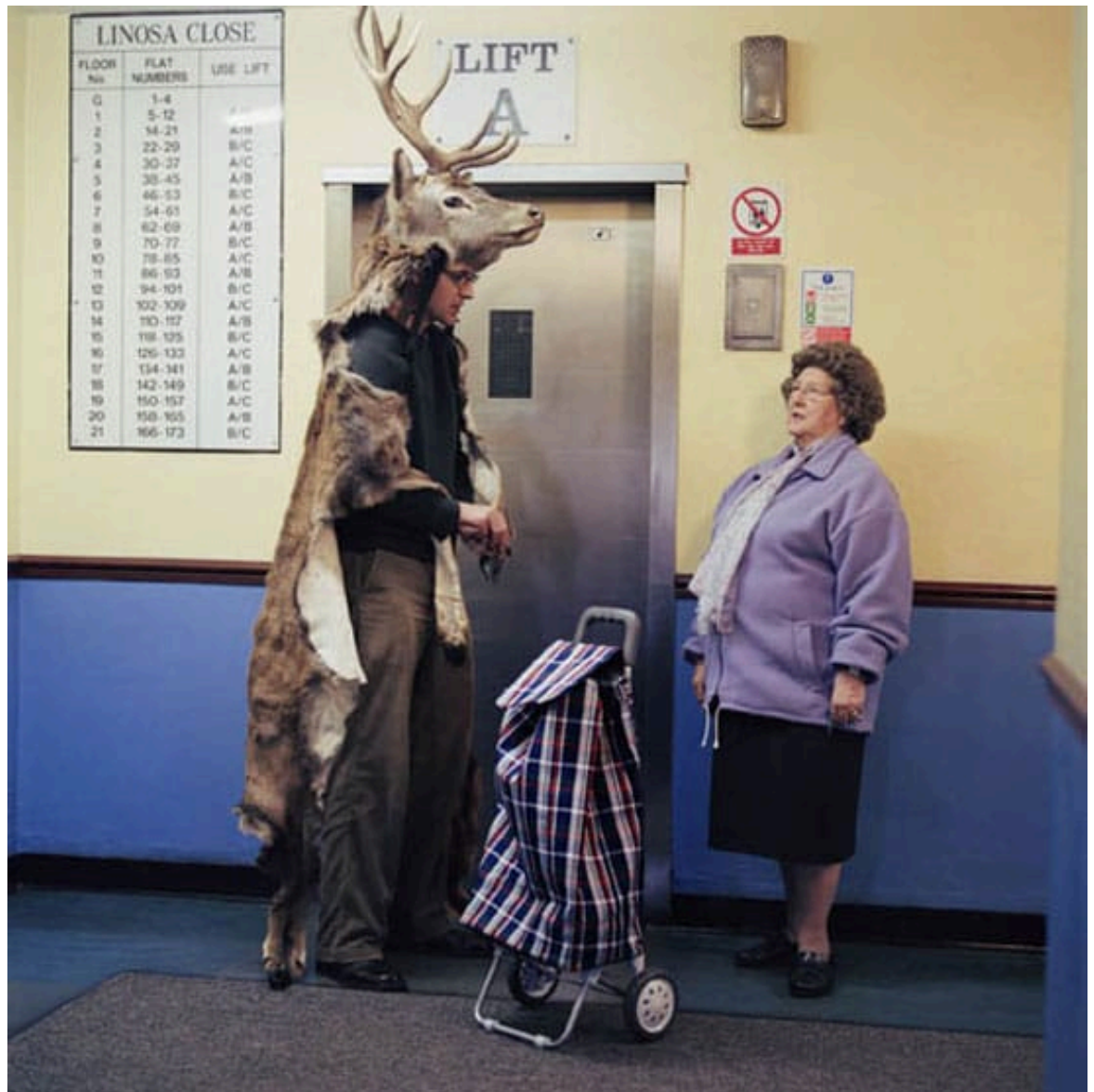


Fig. 4.1: *Journey to a Lower World, Liverpool*. Performance still. Marcus Coates. Photo: Nick David 2004

Is sorrow the true wild? And if it is—and if we join them—your wild to mine—what's that? For joining, too, is a kind of annihilation. What if we joined our sorrows, I'm saying. I'm saying: What if that is joy?

– Ross Gay, *The book of delights: Essays*. Algonquin Books, 2019. p. 50

This chapter contextualises the distinct properties of multispecies creative practice within environmentally-engaged art since the mid-twentieth century, when awareness of human-generated damage became dominant. I identify a range of thematic concerns through which artists address not just biodiversity loss and extinction, but complex issues of social and racial justice and the consequences of fossil-fuel economics and intensive agriculture for planetary health. Conceptual approaches centre on the communication of environmental data (Corby, Weinberg), place-based geopolitical and industrial critique (Brown, Cooking Sections), and the delineation of speculative futures (Superflux studio, Marten). Anthropocene discourse has given rise to an array of practices that develop posthuman and PostNatural configurations (Pell in Davis and Turpin 2015, 299) to reconceptualise human and more-than-human agency in relation to a rapidly changing world.

Multispecies practitioners explore the subjectivity of more-than-human entanglements and perspectives (Kirksey and Helmreich 2010) although not all take a decentred human position. Critical interpretations of the history of natural history provide important commentary on the frameworks that underpin human cultural construction of nature (Holden, Dion), while Coates and Ashton employ critical anthropomorphism to analyse elements of multispecies communication and relationships with technology from the creatures' point of view. Conservation and place-based concerns dominate for Yondonjamts and Imlach, who extrapolate situated ways of imagining environmental and cultural relationships. Feral Practice and Whall combine elements of the above with sensory and embodied investigations seeking to extend human cognition to encompass other states.

Finally, I evaluate craft practices that both differ from and converge with fine art, including those who take a posthuman approach to object-making (Mann, Humeau). I analyse a selection of craftworks that focus explicitly on natural forms to illustrate my contention that these can exemplify an uncritical approach bordering on 'natural appropriation'. The central concern of this section is to identify creative modes that explicitly embrace a decentred human perspective to interspecies relationships, in order to scope out approaches to practice that have the potential to communicate a multispecies sensibility.

4.1 Art and the environment: a thematic overview

Author and climate activist Bill McKibben found visual artists slow to respond to the emergent environmental activism of the mid-twentieth century (2005). From the land art movement of the 1970s, momentum built rapidly, however. By the millennium, with the rise of the Internet, ecologically-oriented art work increasingly focused on representations of newly available environmental data. Cape Farewell pioneered an activist approach to climate change information in 2001. The organisation was one of the first to publicise changes to the Arctic ice sheets through the world-touring exhibition *Art and Climate Change*, 2006–2010.⁶⁰ Over the timeframe of this research, the ecological emergency has become a meta context for much contemporary art practice, spawning a huge range of genres. Methods include material investigation, performance and multidisciplinary collaboration, alongside more traditional object-based work, with the inclusion of raw research material in its own right in the form of readings, collected objects, videos, sound recordings a growing trend.

Art historian T.J. Demos characterises early ecological art as “elegiac” (2016, 11). The observation prompts me to consider contemporary artistic responses through the lens of the ‘five stages of grief’ (Kübler-Ross and Kessler 2005). The stages cycle through denial, anger, depression, bargaining and acceptance (Kessler recently added a sixth, ‘finding meaning’, which could describe all creative practice). Although perhaps trite, their formula usefully characterises phases in the cultural processing of the environmental crisis. If contemporary ecological art is concerned with addressing this huge collective trauma, it first has to unpick the internalised ontologies that have created it. Needless to say, the progression is not linear. Within ecological art practice I identify the following moods: *nostalgic*, negotiating extinction, grief and loss; *didactic*, centring on communicating data; *activist*, critiquing geopolitical and industrial formulations; *dystopian*, (negative scenarios of degraded environmental futures) that I will not elaborate on too deeply here; (see Rimini Protokoll below); and *transcendent*, encompassing speculative post-anthropocene imaginings. These are not mutually exclusive, but delineate a suite of concerns in which multispecies practices find resonance.

⁶⁰ <https://www.capefarewell.com>

4.1.1 Nostalgia

The protest movement Extinction Rebellion⁶¹ recognised the need to pass through solastalgia, a form of ecological mourning (Albrecht, 2005), as a precursor to action. Raw emotion dissolves paralysis as a necessary step towards activism. Exhibitions such as *Ghosts of Gone Birds*, 2011-14, and Andrea Bowers's works *Eco Grief Extinction Series 2021* in *Dear Earth: Art and Hope in a Time of Crisis*, 2023 exemplify the initial stage of *nostalgic* grief. In memorialising disappearing species of Hawaiian birds and plants, painted on cardboard boxes surrounded by mourning figures, Bowers sees herself as an activist. Yet the works have an elegiac quality that perpetuates the notion of a past, pristine nature. Timothy Morton suggests that the “concept of the natural” (2009, 24) fixes aspects of the wild in an idealised, ahistorical construct, and must be dissolved for fully ecological art-forms to emerge. Expressions of longing for a lost Eden reinstate a romanticised nature/culture binary. However, they also perform the important function of recording what has been lost for future generations, and give a narrative voice to those living through loss, as exemplified by the multidisciplinary repository *The Living Archive: Extinction Stories from Oceania*, 2019 – 2023.⁶²

4.1.2 Data-driven

Recognising that the nested problems of the ecological emergency stem from a crisis of political will, environmentally engaged artists increasingly ask probing questions about how individuals and societies can reorganise in a post-colonial, post-industrial, post-anthropocentric context. Demos identifies the Rio Summit of 1992 as a turning point, at which differentials in responsibility for climate damage and its consequences were globally acknowledged for the first time. Initially, artists working with data sought impactful ways to make scientific information more accessible. Yet providing data does not sufficiently influence cultural behaviour or social policy. The “information deficit model of behaviour change” avowed by scientists has been shown to have limited effect (Maggs and Robinson 2016, 177).

⁶¹ Extinction Rebellion, Eco-Grief <https://extinctionrebellion.uk/2019/10/01/eco-grief>

⁶² <https://www.thomvandooren.org/extinctionstories>



Fig. 4.2: **Bound**, Tali Weinberg. Plastic tubing, plant fibers, plant and insect-derived dyes, mineral mordants. 72 x 120 x 1.5” Photo: Philip Maisel 2019

Weaver Tali Weinberg (*Woven Climate Datascape*s, 2015 ongoing, figure 4.2) interprets changes in water and temperature, building fixed points of data into textile documents to record change over time.⁶³ Petroleum-derived monofilament and tubing are wrapped with plant fibres and dyes to highlight the link between extractive petrochemical industries and environmental damage (*Bound* series, 2017-19). By hand-weaving and binding cords Weinberg brings a bodily element into the presentation of bald data through the intensive craft labour of material manipulation. *What Color Was the Water?* (2017) reproduces a single set of ocean temperature measurements spanning 137 years in various qualities of hand-dyed colour to provoke differing emotional responses and question the ‘fixedness’ of data interpretation. Weinberg’s material processes are eloquent, yet there is something almost too tasteful in the subtle textile colour palettes and white gallery context, which distances the aesthetic object from the ‘message’ it conveys, making it palatable in some counterproductive way.

⁶³ <https://www.taliweinberg.com>



Fig. 4.3: *Atmospheric research collective at Planetary Assemblages*, Lethaby Gallery April 2022

The Manifest Data Lab united artists and meteorologists in an interdisciplinary research project (University of the Arts London, 2019–2022). The aim was to explore methods of materialising climate data to promote discussion of its social, cultural and political implications in the public realm. *The Carbon Chronicles* (2021) saw global warming statistics ‘guerilla’ projected onto the House of Commons. Security responses revealed otherwise invisible boundaries of access to public space, creating a parallel with the intention of the artwork, which was to challenge barriers in political discourse. The explicitly public nature of such projects aims to take cultural ownership of complex information to foster discussion of impacts and responsibilities (Corby et al. 2023). In the exhibition *Planetary Assemblages* (Lethaby Gallery, April 2022, figure 4.3) the Atmospheric research collective used tactile objects to promote a visceral understanding with which to question the neutrality of statistics.⁶⁴ Dramatically spiky ceramic spheres and tiny, palm-sized swirling clouds materialised the difference in distribution of global carbon emissions. Data collated from agriculture, aviation and other industries made tangible the unequal axis of responsibility-to-suffering caused by extractivism. The projects described

⁶⁴ <https://www.atmospheric-collective.org>

here are committed to an expanded interpretation of scientific data within the cultural realm, yet they walk an uneasy line between agitprop, the ‘data dump’ and fetishisation of the art object. Public engagement, a collective multidisciplinary approach, and moving out of the gallery characterise many socially-engaged art projects, yet they retain a strong didactic element. By contrast, Olafur Eliasson relies on letting displaced material speak for itself, through the transposition of iconic materials such as Greenland ice and Gulf oil to communicate both the displacement of materials through human actions and the scale and impact of the ‘natural forces’ that those actions both mimic and disrupt (*Ice Watch*, Copenhagen 2014, Tate Modern 2018; *Your oil-spill garden*, Qatar, 2023).⁶⁵

As environmental debate saturates the media, artists seek to overcome public exhaustion by revealing unexpected narratives through more experiential, layered means. Davis and Turpin pinpoint the sensory aspect of living through environmental damage as a site for exploration in art practice, where visual representations of data distance the audience from the phenomena, as being portrayed rather than experienced (2015). Sophisticated, politically engaged art practices draw explicit connections between socio-cultural attitudes to nature and responsibility for real-world outcomes. Such art seeks to influence human perceptions and suggest alternative philosophies to “colonizing nature” (Demos, 2016, 18). Much of this remains human-centric, however.

A number of practitioners engage with the unseen ramifications of technology and industry in a way that combines focus on data with an *activist* approach that moves beyond the didactic. In *The Cloud is more than Air and Water* (2014) Matt Parker of EarthkeptWarm presents a sonic exploration of the infrastructure of digital technology.⁶⁶ Sound and video together convey the heavy materiality of the communication revolution and its attendant power usage. The Unknown Fields Division traced rare metals back to the toxic sites where they are mined for use in mobile phones and computers. Carefully calibrated ceramic vessels were made, incorporating radioactive residue in exact proportion to the weight of waste associated with each item (*What is Luxury?* 2015, Victoria and Albert Museum,

⁶⁵ <https://olafureliasson.net>

⁶⁶ <https://www.earthkeptwarm.com>

figure 4.4). Kasia Molga⁶⁷ made the unseen effects of pollution visible in the *Human Sensor* streetwalk, a performance in Manchester in July 2016, where dancers moved through crowds in costumes that lit up in response to real-time pollution data.⁶⁸ These art projects are united in a community of practice concentrated on making the impacts of human industrial practices publicly accessible. They integrate community engagement, documentary, and material manipulation into a cohesive whole using a more emotive approach, as a precursor to collective action.



Fig. 4.4: The amount of toxic clay produced in the manufacture of a single smartphone is moulded into a traditional Ming vase form. Unknown Fields Division. Film Still ©Toby Smith 2014

The move to presenting research material as part of an artwork in its own right has become a regular part of exhibition making in the last decade. In *Dear Earth: Art and Hope in a Time of Crisis* (2023), Imani Jacqueline Brown⁶⁹ included her collaborative ongoing research into the petrochemical industry in Louisiana, *Follow the Oil*,

⁶⁷ <https://www.studiomolga.com>

⁶⁸ <https://invisibledust.com/projects/kasia-molga-human-sensor>

⁶⁹ <https://imanijacquelinebrown.net>

(2019–2023).⁷⁰ I visited with a graphic designer, who was impatient at what she saw as its perfunctory production qualities, wanting to see more artfulness. However, Brown does more than interpret data. The main installation *What Remains at the Ends of the Earth?* (2022) layered sound, spoken word and moving images from different vantage points – satellite, her own various modes of travel and industrial logistic planning, to connect histories of extraction within a landscape known as Cancer Alley. Her voiceover bears witness to the lived experience of populations descended from enslaved peoples to whom she has a personal connection. Brown used the well-worn iconography of the sphere to bring all the elements into view, projecting supply chains over oil wells as clusters of extraction become visible on what began as a star chart. The film gradually zooms in on the heavily scarred land of Louisiana, where the final words find sources of hope and resistance in the more-than-human life in the river's mud, and previous human acts of planting. The narrative ends there: Brown does not develop the hint at a multispecies future further. So far, so human-centric. This work exemplifies the current imperative to bring many levels of competing knowledge together that sometimes renders artworks less resolved. Perhaps the *Follow the Oil* video detracted from the immersive experience of the main piece; the complexity is not fully synthesised and remains didactic. In balancing the urgency of the topic with a turn away from the object, artistic production can become fragmented when trying to cover the bases of activism, public engagement and aesthetic satisfaction all at once.

4.1.3 Activist

Cooking Sections (spatial practitioners Daniel Fernández Pascual and Alon Schwabe) use architecture as a starting point to debate the political structuring of environments.⁷¹ Their CLIMAVORE project develops areas of 'tidal commons' through site-responsive structures that regenerate food production in community settings. At Portree, Isle of Skye, a metal structure in the intertidal zone supports the growth of seaweeds and shellfish (both of which carry out 'ecosystem services' of cleaning the water). The table is used in collaboration with local residents and businesses to facilitate conversations about future food sources and practices that

⁷⁰ <https://followtheoil.org>

⁷¹ www.cooking-sections.com

move beyond the intensive farming of salmon, becoming a communal dining area when the tide is out.

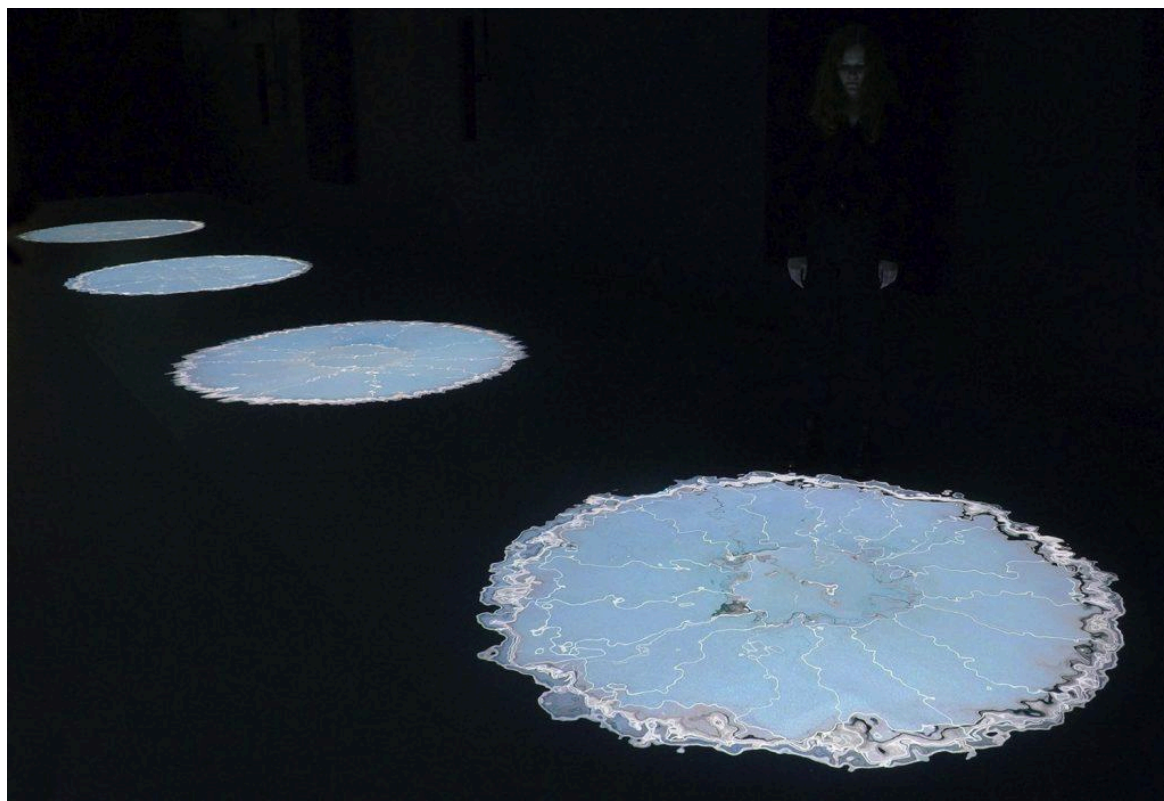


Fig. 4.5: *Salmon: Traces of Escapees*. Cooking Sections, Turner Prize exhibition, Coventry 2021

Their Turner Prize nominated installation *Salmon: A Red Herring* (Tate 2020) exposed the culturally-tweaked manipulation of colour to fake ‘natural’ flesh in farmed fish that are no longer pink and resulted in the removal of farmed salmon from the gallery’s menu. Such advocacy ensures a material outcome that embeds ecological ethics firmly within the artwork as a whole, rather than as a gesture (although commentators The White Pube (2021) found the bandwagon of publicity it generated to be an easy marketing win for an establishment like Tate, pointing out that they have thornier institutional issues to tackle). Performance, humour, workshops and imaginative use of communal space move the work of Cooking Sections beyond a didactic approach or gallery focus, to create a coherent multi-layered experience that is not aimed at exclusively human concerns, and has systems change through behaviour adaptation as its goal.

4.1.4 Transcendent

Two pre-pandemic exhibitions, *Eco-Visionaries: Confronting a planet in a state of emergency*, Royal Academy and *Terra Nexus*, Proposition Peckham, contained uneasy combinations of posthuman acceptance and transcendental fantasy. Technological futures mixed with ancient creation stories in a series of installations by emerging artists in *Terra Nexus*, where a preoccupation with (non-Christian) penance and a return to ritualistic nature practices dominated as a theme. *Eco-Visionaries* critiqued the genetic reconstruction of vanished species (Alexandra Daisy Ginsberg⁷²) and an alarmist-humorous installation by Rimini Protokoll described a future dominated by squid.⁷³ While these two works tiptoed towards multispecies discourse, there was a defeatist feeling to both exhibitions as a whole, projecting narratives of partial acceptance and comical-dystopian future scenarios as a way of bypassing ‘the trouble’, just before the first Covid-19 lockdowns. In the same year, *The Botanical Mind: Art, Mysticism and The Cosmic Tree* (Camden Arts Centre) spanned five hundred years of history to promote recognition of the “encoded vegetal intelligence inherent in plant forms” (Buenfeld, 2020, 4). The exhibition presented a continuum of planetary understanding embracing indigenous and spiritual knowledge from a variety of traditions, sidelined in contemporary Western culture until recently. A complete contrast with the dystopian exhibitions outlined above, *The Botanical Mind* nevertheless shared an interest in returning to pre-industrial cultural wisdom as a way of healing ecological relationships.

A strong strand of emergent creative practice is influenced by posthuman thinking and feminist philosophy. Artists combine acceptance of altered planetary realities (population growth, biodiversity loss and dwindling resources) with imaginative speculations for future social restructuring in playful scenarios, as if seeking to transcend the heaviness of present day solution- and ethics-based debates. The exhibition *Our Time on Earth* (Barbican 2022) brought together practitioners from

⁷² <https://www.daisyginsberg.com>

⁷³ Rimini Protokoll’s work could have been inspired by the “Octopi Wall Street” Tweet by David Freeman @ironicsans October 3, 201, which spawned blogs, merchandise and a play in the wake of the Occupy protests. [Eco-Visionaries review – the salt flats will die and the jellyfish shall rise – Rimini Protokoll](#)

art, design, fashion, activism, science and indigenous cultures to present immersive experiences that explore perspectives from the soil, underwater, and the air which place humans differently within living assemblages. Exhibits considered multispecies justice (Superflux), dissolving human boundaries (Victoria Vesna⁷⁴), reappraising relationships with materials (Territorial Agency⁷⁵), and indigenous ways of knowing (Selvagem⁷⁶). The Barbican setting, with its dilapidated public spaces fittingly suggested the superstructure of a bygone age.

The multispecies banquet installation *Refuge for Resurgence* by Superflux studio⁷⁷ adapted a dinner table to accommodate a range of species traditionally considered pests. With perches for pigeons, a plate for a snake, and room for insects and plants, the installation purported to represent a ‘negotiation’ space for interspecies justice and democracy (Jain, 2022). The artwork takes a step towards critical anthropomorphism, but falls short of developing the decentring narrative in sufficient depth. In comparison with multispecies works discussed below, its co-option of the well-worn trope of the dinner table (Judy Chicago, 1979; Studio Orta, *The Meal Act*, 2000 ongoing⁷⁸) is underpowered. The table setting is determinedly anthropocentric, the ‘conversation in the ruins’ not begun. Superflux studio works with governments and corporations on immersive installations to suggest alternative, positive future scenarios for large policy issues such as renewable energy and pollution. Yet Demos might include this piece in his criticism that artworks influenced by speculative realism emanate a “withdrawal from the political sphere” (2016, 21) due to its seemingly abstract cultural setting.

⁷⁴ <https://noiseaquarium.com/the-project>

⁷⁵ <https://www.territorialagency.com/ta-oceans>

⁷⁶ <https://selvagemciclo.org.br/flecha>

⁷⁷ <https://superflux.in>

⁷⁸ The Meal Act is a series of banquet performances addressing food security, performed around the world since 2000.



Fig. 4.6: *Refuge for Resurgence*. Installation. Superflux Studio © Mark Cocksedge 2021

By contrast, sculptor Marguerite Humeau compresses references across vast periods of time, from fossil records and early human artworks to biological-technical resonance scans, in works that suggest yet-to-be born cyborg creatures morphed with the bodies of those under threat of extinction. Her installation *Migrations* at the 59th Venice Biennale exhibition *Il Latte Dei Sogni/Milk of Dreams* (2022) imagined sea creatures becoming aware of their own mortality among the warming currents. Her sculptures, partly made from bone and ocean plastic, suggest ritual dances for transcending death, brought into consciousness at the moment of ecological threat (figure 4.7). The exhibition curator Cecilia Alemani used texts from Haraway and the feminist science-fiction of Ursula Le Guin as a guide for choosing the sensibilities of the work displayed. Humeau's use of technology and merged materials communicates the uncanniness of more-than-human entanglement in the transition towards the posthuman.



Fig. 4.7: *Migrations (El Niño, Kuroshio, La Niña)*. Biological and synthetic resin and polymers, salt, algae, seaweed, bone, pigments, mineral dust, ocean plastic, glass, and stainless steel. 2022. Marguerite Humeau. Images: Roberto Marossi, courtesy the artist, C L E A R I N G and White Cube 2022

The implications of human-generated planetary change have become a meta-context for much current artistic production. The development of a range of artistic responses to human-generated environmental degradation outlined above document a society gradually discarding outmoded and self-limiting ways of being in the world. While anthropocentric geopolitical and data-driven works dominated at the turn of the millennium, biological entanglements and the development of more-than-human subject positions increasingly appear as subject matter in more recent mainstream exhibitions. Creative practice that decentres the human emerges to embrace new human-nature paradigms in an irrevocably changed landscape with an emphasis on how to live through and with ecological change, and recalibrate ontologies in relation to it.

4.2 Multispecies practitioners

Since Joseph Beuys' famous sojourn with a coyote in a New York gallery in 1974 (*I like America and America likes me*), contemporary art has presented the split between animal and human cultures as a rift in need of healing. While Beuys used

the coyote as a metaphor for America and its divisions rather than as an interlocutor on its own terms, the performance centred on communication across conceptual and cultural barriers (Levi Strauss 1999). It is this, together with the theme of psychic healing, that has lent the piece an iconic status that resonates beyond the specific politics of its time and place.

Today, many artists turn to the interspecies encounter as a site for exploration in its own right. Multispecies creative practice seeks to expand human sensibility to encompass greater awareness of ongoing interactions with other life-forms. Practitioners adopt strategies of co-production, physical and sensory exploration, performance and material interventions to investigate interspecies relationships. I evaluate the relative effectiveness of the intentions and methods of a selection of relevant artists, and outline my own approach in relation to these findings.

4.2.1 Making with the more-than-human

For some artists, the first step towards engaging with other life-forms is to develop ideas of making ‘with’ or ‘for’ other creatures. This is especially popular in design where co-production appears to resolve tensions about human exploitation. Interactive sculptures such as *The Hive* at Kew (Wolfgang Buttress 2015⁷⁹) display the activities of bees in the landscape through a seventeen metre-tall sculpture that lights up in a real time response to their vibrations nearby. Such work, while it draws attention to the presence of (in this case) bees, tends to re-instrumentalise the more-than-human, who after all have not chosen to participate. Where biomimicry adopts the structures and technologies of biology to inform design and technology,⁸⁰ biodesign seeks to harness the agency of living material as a way to move towards less damaging working processes (Kapsali and Hall 2020). While these disciplines often embody sustainable principles, they remain within the paradigm of human-centred thinking, which this research challenges. At *Entangled Futures*, a live discussion on bioethics at UAL (February 2022), students ‘designing with’ nature through the manipulation of microbes or mycelium described confronting the independent life-force of their “biopartner” (Frankjaer in Fletcher

⁷⁹ <https://www.wolfgangbuttress.com>

⁸⁰ For example, the nanostructures of moth eyes have informed the development of anti-glare coatings for glasses (Sun, Wang et al. 2018).

et al. 2019). As they became sensitised to the delicacy of the power relationship, the emphasis shifted from outcome to process. Biodesign draws attention to, but does not sufficiently challenge, the binary divide between human and other. Such thinking is often a gateway to deeper understanding, however, encouraging deeper ecological understanding and ethical responsibility.

4.2.2 Natural history collections

The visual tropes of natural history collecting, from the wunderkammer of the sixteenth and seventeenth centuries to the formal presentation of classified specimens in museum collections of the Victorian era, provide a popular framework for artists to critique embedded cultural constructs of ‘nature’. In *Natural Selection* (2017), Andy Holden⁸¹ contrasted the violence of egg-collecting from the wild (a cultural and educational practice banned in 1954) against the presentation of birds as sculptors in their own right. His installation of nests among sculptures and films accentuated the individual decision-making of birds’ building skills, each inventing within the cultural tradition of their own species (figure 4.8). An extensive display of skilfully crafted ceramic replica eggs recalled the excesses of collecting mania, at the same time as presenting the objects as just another cultural artefact among so many more-than-human ones.



Fig. 4.8: *Natural Selection*. Newington Library, London © Andy and Peter Holden 2017

⁸¹ <https://andyholdenartist.com>

Mark Dion uses the tropes of natural history collecting and museum display to develop an ongoing institutional critique that examines issues of power and knowledge control in relation to the more-than-human (Erickson 2017). *Theatre of the Natural World* (Whitechapel 2018) juxtaposed shelves of deliberately fake neon-lit plaster specimens with live zebra finches in a 'library' cage, blithely defecating on the open pages. Installations of nineteenth-century hunting equipment, scientific classification – cabinets, nets, solar topees – become aberrant taxonomies⁸² suggesting the individual eccentricity of the human collector or explorer, and the artificiality of these methods of 'ordering nature'. Conversely, the value of such personal collections is celebrated in *Memory Box 2016* (Tanya Bonakdar Gallery, New York, 2016). A vernacular shed full of random boxes of 'things' can be rummaged through, reminding us of the pleasure of interaction with vibrant material, and its potential to spark empathy for other ways of being, through curiosity (the point of the original collector's cabinet). Dion and Holden bring us into conversation with the more-than-human in contexts where we cannot ignore the idiosyncratic cultural framings that may otherwise be taken for granted. I have exhibited *A Scholar's desk* (Fig. 6.7) covered in present-day citizen-science paraphernalia, expired specimens and out-of-date reference works in installations, to show both the ongoing materiality of my research and its context (section 6.2.2).

4.2.3 Performance

Artists who adopt the durational performative approach of Beuys develop a range of strategies to imagine themselves into more-than-human bodies. Designer Thomas Thwaites's attempt to live as a goat as 'a holiday from being human' (Thwaites 2016) lasted only a few days. His desire to test his cyborg propensities was limited by his technology (stilts and an artificial stomach to digest grass). The experiment encoded a longing to escape human limitations characteristic of the posthuman transition, but remained focused on his internal, solitary experience.

⁸² Borges imagined a Chinese taxonomy that ran "animals are divided into: (a) belonging to the emperor, (b) embalmed, (c) tame, (d) sucking pigs, (e) sirens, (f) fabulous, (g) stray dogs, (h) included in the present classification, (i) frenzied, (j) innumerable, (k) drawn with a very fine camelhair brush, (l) et cetera, (m) having just broken the water pitcher, (n) that from a long way off look like flies." (Borges 1937, 103).

In contrast, Miranda Whall⁸³ stays with the physical challenge of inhabiting another species. Whall makes narrative films about place from a more-than-human standpoint. For *Crossed Paths – Badger* (2019), she crawled through a forest with a badger's head strapped to her back, every hour for twenty-four hours. As a self-conscious cyborg covered with Go-Pro cameras, the effort of 'becoming badger' loosens Whall's bodily sense of being human, facilitating an altered sensory understanding. Exhaustion, discomfort and prolonged immersion in mud, leaves and cold dissolve the senses into a different apprehension of being, somehow merged with the woodland itself. The film records the ground-level thrashing through the undergrowth, but writing about the experience is also crucial for the artist. The piece comes together in the meeting of the two, allowing us to see from inside and outside the experience at once. Whall's phenomenological aim opens the artist more fully to the transformatory mental and psychological aspects of the experience than Thwaites's self-referential suffering, but neither artist interacts with a living badger or goat. Their experiences are solitary.

Marcus Coates⁸⁴ also employs a deliberately literal approach to "becoming animal to see what humanness means" (British Council Arts 2014). A favourite strategy appropriates shamanic ritual for imaginative journeys that ask more-than-human consciousnesses to solve human problems. In *Journey to the Lower World* (2004, figure 4.1), dressed in a stag's head and pelt, he performed as an intermediary for bemused residents of a condemned housing block to ask the birds what might protect their homes. Though comic in form, Coates's performance is not at the expense of the residents, nor was it mystical. Rather, the work brings a completely unexpected more-than-human slant to the conversation. For *Human Report* (2008), Coates turned the classic nature documentary on its head, dressing up (in cardboard) as a rare Galapagos blue-footed Booby, to ask "difficult questions" of passers-by from the bird's point of view. The work uses the performative pathos of projection into another species to drag his audience a little closer to empathy and curiosity. Other works attempt a more embodied metamorphosis. *The Dawn Chorus*

⁸³ <https://www.mirandawhall.space>

⁸⁴ <https://www.marcuscoates.co.uk>

(2007) shows singers ‘becoming’ birds by learning slowed-down birdsong that, when speeded up and filmed, creates, in the accuracy of the sound, the uncanny sense of an intermediate space of being bird/human. In a series of photographs from 2013 (figures 4.9 and 4.10), Coates covered himself variously with shaving foam, dough and sugar, to enter an intermediate state between himself and several native British moth larvae. The photographs provoke the beginnings of an imaginative leap in the viewer through the extremity of his intention. There is a seriousness to his performativity that forces the viewer to consider his perspective.



Fig. 4.9: *Iron Prominent, Notodonta dromedarius (Moth)*. 2013. Self Portrait, shaving foam. 172.7 x 121.9 cm. Archival Giclée Print mounted on Aluminium. Marcus Coates. British Council Collection. Photo: Nick David.

Fig. 4.10: *Convolvulus Hawk Moth, Agrius convolvuli (larva)*. 2013. Self Portrait, shaving foam. 172.7 x 121.9 cm. Archival Giclée Print mounted on Aluminium. Marcus Coates. British Council Collection. Photo: Nick David.

4.2.4 Practices decentring the human

Artists who employ anthropomorphism through adopting shamanic practices, as Coates does, inhabit a contested area where their intentions may be misread as the appropriation of indigenous cultural practices. Yet his use of ritual counteracts the scientific over-objectivity that dismisses such communication from the debate, fearing what cannot be fully explained. As perhaps in original cultural contexts, ritual is employed here to temporarily project ‘into’, rather than ‘onto’ more-than-human identities, for purposes of healing or conflict resolution. This is valuable for recalibrating relationships within environments.

Mongolian artist Tuguldur Yondonjamts intermingles drawing, mapping, object-making, film and ritual to navigate the changing landscape of his homeland, altered by mining and rapid development. He describes his works as journeys of connection “tracing the coexistence between the tamed and untamed world” (Arts Catalyst 2018). The video *An Artificial Nest Captures a King* (2016) draws on his cultural heritage to recreate a shamanic journey, travelling back from a time of technological intervention in nature to enter and animate an ancient Mongolian fossil crocodile, the *Tzaganosuchus*. Climbing into a crocodile suit reminiscent of a sleeping bag, printed with one of his map drawings, Yondonjamts dreams. The dream connects with deep time and place to access the disappearing knowledge of close relationship with nature embedded in his nomadic culture. He draws physical, mythical and geopolitical elements together to talk of an altered world through an act of anthropomorphic projection.



Fig. 4.11: *An Artificial Nest Captures a King*. Video still © Tuguldur Yondonjamts 2015

In critically assessing these artists, I am drawn to their use of inversion to decentre the human in the subject matter, rather than the desire to use my own body as a site for practice. Hermione Spriggs⁸⁵ pursues the sensory goal of “perspective-exchange” through direct encounters with wild animals (Spriggs and Colchester 2021). She is the first artist discussed here (after Beuys) to focus on direct communication with living species. Spriggs began by exploring the idea of art ‘for’ other animals, with the specialised skills of hunting as an entry point. Spriggs uses elements of craft, such as the design of eel-traps, as part of installations, and her expanded anthropological practice makes increasing use of writing and film to communicate multiple viewpoints. She probes the limits of the human sensory apparatus as a fruitful site for developing multispecies understanding as does Whall. *EarthSwimmers* (2021), a film about a mole-catcher, partly attempts the mole’s eye view, but the fulcrum is the skill of the catcher. Using sensory cues such as vibration and feeling the size of mole holes, the catcher shows how humans can extend their cognition into the landscape to ‘think like a mole’.

⁸⁵ <https://hermione-spriggs.com>

The paradox of the hunter becoming one with the prey through sensitivity and admiration, in order to kill, is revealed.⁸⁶

Multispecies practitioners often place their work beyond the gallery as a decentring device. Working as Feral Practice⁸⁷ Fiona MacDonald approaches interspecies arts research through the lens of ‘unknowing’ nature. In a seven-year project with wood ants in Kingswood, Ashford, MacDonald began by exploring co-production of artwork using food colouring to facilitate mark-making with ants. The process soon gave way to a lengthy process of ‘unlearning’, allowing a different kind of art practice to emerge. Initial experiments revealed a great variety of responses between different individuals and groups. The ants “made a range of decisions”, revealing multiple points of view at work (*What Can A Garden Be?* March 9, 2021). Co-production here is construed in its wider sense to recognise, with Barad (2007) that life is an ongoing series of meetings between multiple different entities. A deliberate focus on “reciprocal attention” between species led MacDonald to recognise that decentring the human in relationships with nature involves an active process of unpicking knowledge and assumptions. The work recognises that agency and intelligence are distributed rather than centred in the human actor alone. Rethinking power relations in this way recognises deeper levels of intention and creativity in more-than-human life-forms, through constant experimentation and variety. Reflection led MacDonald to abandon the attempts to produce physical artworks ‘together’, and deeper engagement with fieldwork. Centred on nature’s famous self-organising principles as evident in the social structures of ant colonies, she identifies numerous routine and domestic activities. This deliberate anthropomorphism challenges human perceptions of insects as machine-like clones. The woodland was full of characterful “nested domesticities” that are the evidence of the ants’ maintenance of varied and complex cultures.⁸⁸ Focusing on ants allows MacDonald to reposition interspecies engagement as a key site for developing ecological literacy, as I do with my work with moths. Through encounters with the wild, the artist represents a community

⁸⁶ In describing an ‘anthropology beyond the human’, Eduardo Kohn (2013) elaborates on how exactly this projection into the mind of the jaguar is embedded in Avila culture in the Amazon, where human and more-than-human creatures inhabit and hunt each other for survival.

⁸⁷ <https://www.feralpractice.com>

⁸⁸ Feral Practice. “What Can A Garden Be?”, Goldsmith’s Centre for Art and Ecology, March 9, 2021.

of artist-researchers interested in rebalancing ethical priorities in a time of human-induced ecological emergency. Her work is an ongoing example of a decentred practice wherein the understandings gained through the research process are the outcome itself. Both the artist and her art become feral – not wild, but wilder, gaining a deeper understanding of the layered cultures of the more-than-human world.



Fig. 4.12: *Queenright*. Video still. Feral Practice. 3 March 2021

MacDonald then developed an expanded practice involving film and audio work that expresses the decentred perspective. Filming *Queenright* (2020) began as a ‘documenting’ process, but expanded from individual ‘co-production’ between ant and artist to a wider montage of fluctuating interactions in the wood involving sensory capabilities not possessed by humans. Glimpsed among multiplied recordings in the forest, the human makes “esoteric attempts at connectivity” (Feral Practice 2021), but these are not central to the narrative, and may not generate a response. MacDonald includes intersubjective experience such as her dreams about the ants as valid forms of ‘evidence’ that supplement direct

observation. This is not a paradoxical return to anthropocentrism, but an expanded recognition of more-than-human relations. Prioritising different types of knowledge gained through immersion in the semi-wild world of the plantation, MacDonald reinstates devalued forms of subjective experience as relevant and valuable data. In collaboration with Coates, MacDonald produces an ongoing series of 'rituals of interspecies communication'. *Ask the Ants* (2022 online), was part of a wider series of events encouraging members of the public to seek phone-in-style advice from birds, plants, insects and fungi.⁸⁹ The two artists dismantle species boundaries from different perspectives; where MacDonald began with a desire to make art with other species, Coates investigates the 'gap of difference' head on.

Eleanor Morgan⁹⁰ brings an overt sense of humour to the mundane ways in which human and more-than-human lives are entangled. A series of short videos *Moments of Pleasure*⁹¹ (2021 ongoing) juxtapose snippets of everyday life with 'wildlife' shots of copulating insects, interrogating themes such as motherhood through a sideways glance. The exhibition *Tale of the Frozen Bits* (Castlefield Gallery 2023) connected nun's urine, cryogenic embryo storage and toad skins to expose how animals are deeply involved in human in vitro fertilisation and drug production. Refreshingly, it highlights the comfort that can be found in more-than-human entanglements, recognising the involvement of a range of different lives in the stressful and potentially isolating experience of IVF treatment.

Morgan's lo-fi approach to video exploits the gap between words and images. The juxtaposition of different registers, interspersed with 'inappropriate associations' becomes a sense-making method to highlight the value of unlikely combinations of experience and knowledge (*Tale of the Frozen Bits*, Castlefield Gallery 2023). To accompany the exhibition, *Tomas Saraceno in Collaboration: Web(s) of Life* (Serpentine South 2023) where research alongside spiders formed the focus for explorations of more-than-human ways of seeing and knowing, Morgan revisited her connections with spiders from her book *Gossamer Days* (2016). *Have you had a productive day?* (2023) is a short film that includes video diary confessions and

⁸⁹ Feral Practice. "Ask the Ants" online event, January 19, 2022. <http://www.askthewild.net>

⁹⁰ <https://eleanormorgan.com>

⁹¹ <https://vimeo.com/eleanormorgan>

footage of family life. The title questions human cultural values (time spent watching insects copulate?) in a feminist approach foregrounding the domestic, with its challenges to concentration and its demotion in the public gaze. The spiders appear fleetingly, in a race with members of the household off screen.



Fig. 4.13: *Have you had a productive day?* Video still © Eleanor Morgan 2023

4.2.5 Moths as subject matter

In Edwina Ashton's short, fixed-camera video *Moth* (2002), she wanders around a room despondently, dressed in a homemade moth costume, while a voice reads from an early edition of the Collins New Naturalist series. Ashton dresses up to underline both the bathos of human projections onto other species, and the importance of the attempt. The text describes the killing of specimens and anatomical details. By drawing attention to the character of individual living beings in specific situations, rather than species (Elderton 2011), Ashton uses humour to highlight the absurd clinical violence embedded in human dealings with other species. As with Coates, the performative element is limited to costume, and neither has an explicit ecological message. Ashton does not 'act out' the character of the moth; rather, her anthropomorphism lies in the scale of bodily transposition between moth and human. The accusatory image asks whether it is the text or the person dressed as a moth that is most anthropocentric.

Two decades after Ashton's film, the rise of Extinction Rebellion and then the Covid-19 pandemic prompted landscape painter Sarah Gillespie⁹² to develop an overtly ecological subject. Gillespie makes detailed photorealistic mezzotints. During lockdown she began to draw native moths captured in her garden light trap in Devon. The large monochromatic works depict moths from above, as in life. The wings are not spread artificially as with preserved collections, but the echo of the pinned specimen remains. Mezzotint is a painstaking craft: a large copper plate is scratched all over and then slowly rubbed by hand to give areas of light in the printing. Gillespie is alive to the poetic correlation between her overlooked art-form and the lowly status of moths in contemporary Western culture. To slowly "polish the light back in" requires paying attention to each scale, joint and antenna (Groundwork 2020). The isolation of the moth body and the absence of colour reveals the poignancy of these mute, half-seen bodies under threat. They seem to be disappearing into the dark. The attention the works received in the press post-Covid allowed Gillespie to amplify her message about the conservation requirements of her subjects with equal eloquence. Her traditional craft-based practice has always included writing, and, with the moth works, expanded to include moth-trapping events at galleries across the United Kingdom.



Fig. 4.14: *White Plume (the phantom)*. Mezzotint engraving, 16 x 16" © Sarah Gillespie 2019

⁹² <https://www.sarahgillespie.co.uk>

Geoffrey Mann⁹³ takes a posthuman approach to object-making. In *The Secret Life of Shadows* (2013) Mann extends anthropomorphism towards glass objects, to materialise their sensory interaction with humans and imagine their feelings on being used. Motion capture software tracks a moth's phototactic trajectory around a light source in *Attracted to Light* (2005). The traces are then 3D printed as a lampshade sculpture, revealing the agency of the now removed light source. Long exposure photographs of an aerial meeting between two moths are engraved into glass blocks in *Dog Fight* (2005). By combining glassblowing craft with digital technology, the works display the invisible dialogue between insects, 'matter' and time. In framing these usually invisible events or experiences as traumatic, Mann highlights the inequality buried within many human conceptions of the agency of more-than-human 'things'.

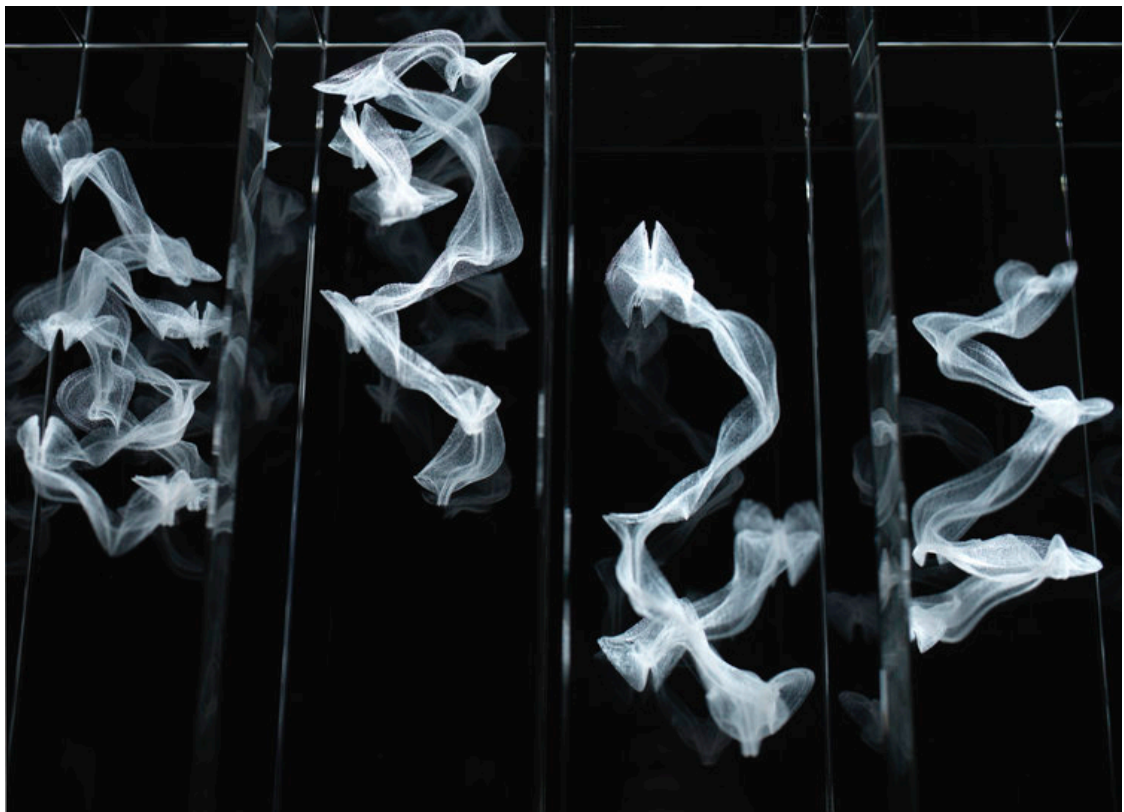


Fig. 4.15: *Dog Fight* (close up). Engraved optical crystal © Geoffrey Mann Studio 2005

⁹³ <https://geoffreymann.com>

Stan Brakhage's seminal film *Mothlight* (1963) creates another strangely direct sense of flight. Channelling his sadness at the futility of the self-immolation of moths drawn to flames, *Mothlight* is an anthropomorphic projection of the difficulties Brakhage was facing in making art. He used their bodies to become the film itself, attaching their wings between tape as a metaphor for the exhaustion and sacrifice he felt in his creative process, not even being able to afford film. Brakhage's work is made of moths, but Mann's is in one sense, made by moths. Both pieces raise questions about co-production, instrumentalisation and consent.

Hannah Imlach⁹⁴ is interested in the behaviour patterns of wild species, making site-specific sculptures to render these visible in a conservation context. Defining multispecies artwork by the way it engages with the sensory worlds of more-than-human beings, her aim is to "strengthen multispecies connection" through a focus on fleeting moments of contact informed by the animal's unique ways of being (2019). *The Moth Kota* (2021), a sculpture situated in an RSPB nature reserve in Loch Lomond, Scotland, responds to the daily rhythms of native moths and is conceived as an alternative to the humane light trap used by lepidopterists (figure 4.16). At night the illuminated sphere attracts moths, who enter the open cone at the top. Humans can visit their resting place during daylight. At dusk, the mesh-covered panels are lowered by volunteers, freeing the moths. Imlach embraces the concept of co-production, seeing the work as informed by the conservation specialists at the reserve, activated by visiting moths and humans.

The Kota is designed as a gathering place, based on the temporary shelter of a Sami tent. For Imlach, the central idea of the Moth Kota is to encourage a "more polite form of cohabitation" (2021). Rethinking the notion of the 'trap' by letting humans into the same space as the moths while they rest creates a more ethical encounter between species. However, in ongoing research, Imlach is alive to questions of whether any interference in the lives of other species for the purposes of making art can be considered ethical. I return to this subject in my own work in Chapter Six. The insight of a lack of 'politeness' in the notion of a trap resonates with the

⁹⁴ <https://www.hannahimlach.com>

chagrin I have felt at damage done on the harsh environment of my roof, leading my work to explore ethical subjects in a different way. It could be said that the framing of the Moth Kota as a place where “the moths rest gently until evening” (Imlach 2019, n.p.) elides the fact that it is perhaps just a hotel with slightly higher specifications than my own light trap apparatus.



Fig. 4.16: *The Moth Kota*. Accoya, aluminium, galvanised steel, blown acrylic, fabric mesh and ultraviolet light. © Hannah Imlach 2021

Chapter summary

Through reflecting on the practices surveyed, I define multispecies creative practice as the interrogation of the boundaries of interspecies relationships through multimodal means. Practitioners adopt a range of methods and narrative devices to elicit both shock and empathy. Anthropomorphism is a helpful tool when used knowingly, and can take different forms. Some artists use humour (Morgan) and absurdity (Ashton, Thwaites) in order to understand interspecies relationships differently. Performative elements are useful for making audiences self-conscious. I have tried this myself, wearing a lepidopterists’ head-torch to narrate *Nourishment* to gain the attention of my listeners. Coates employs this trick on occasion, but also shares with Whall the adoption of performative elements to

facilitate stepping beyond the self in acts of 'becoming with' another species. Practices of cognitive extension have an essential psychological function of release from narrowed or partial perceptions through a temporarily expanded consciousness (Pedersen 2007). Multispecies practitioners use this to activate the boundary and sensitise humans to its porous nature. The subject of interspecies relationships cannot be broached without acknowledging the subjective presence of humans.

Thwaites sought liberation through prosthetics, but only proved Nagel's argument about the impossibility of sensory translation between species. I do not feel drawn to this route in my own practice, because my intention is not to understand what it is like to be a moth. My research is concerned with decentring the human within these relationships. Not all the practitioners surveyed here have a decentring motive in mind: some use the methods to circle back to exclusively human concerns. I only want to 'become moth' enough to be a better companion. I delight in their unknowableness. I do not want the narrative to focus on me, but on the relationship. I resolved this tension in my own work through the use of autoethnography to reflect on my own place within the work, and developed creative writing as a stepping-stone towards an expanded practice. I remain sceptical about co-production. I understand the desire to acknowledge the agency of the more-than-human, but feel the claim too easily becomes an excuse for instrumentalisation under a different name.

Many artists communicate the complexity of their topic by layering different practices together. While Yondonjamts continues to include object-making in his process, Spriggs and MacDonald seem to have sidelined it in favour of immersive film, as it allows for multiple perspectives. This may be a byproduct of social media becoming a key access point for artistic work today. Narrative film has become a central medium for communicating visual and sonic exploration, alongside the ability to explain contexts and research journeys. Nevertheless, some very effective artworks, as different as those of Imlach and Humeau, rely on the strength of the ideas synthesised through a primary material object. Next, I look more closely at the role of craft and object-making.

4.3 Craft



Fig. 4.17: *Softer Than Stone*. Scots elm wood and pewter, 75 x 95 x 150cm © Max Bainbridge 2024

[C]raft was invented as an absence.

– Glenn Adamson, *The invention of craft*. Bloomsbury, 2013, p.185.

A hollowed-out tree trunk, a huge curl of bark, lies in a white cube gallery, supported on two tiny lumps of cast pewter. The proportions of the prone log recall the human body, and the delicacy of its interior carving turn the dead wood into a desirable commodity (figure 4.17). The work is presented as a “lament on what it means to be human ...within a fragile and ever-changing ecosystem” (Forest + Found, 2024).⁹⁵ The scale and skill of the piece epitomise the impact of high-end craft presented in a fine art setting. It also sits firmly within well-worn tropes

⁹⁵ <https://www.forest-and-found.com>

linking craft and nature: the elegiac tone, the ‘truth to materials’ approach, and the use of natural forms as a shorthand for virtuous human-centred reflection.

4.3.1 Craft values

Here, I critically investigate the unspoken cultural values informing craft practice as the background to my own professional experience as a designer-maker, and delineate their difference from, and alliance with, fine art concerned with ecology. The research began by questioning the limitations of object-making as a channel for creative expression in a time of environmental emergency. This extends to ideas that perpetuate the use of ‘natural’ forms or materials as a symbol of unexamined virtue, and the repetition of celebratory or wistful narratives.

An association between integrity and craftsmanship dates back to the setting up of mediaeval craft guilds. Ethical behaviour became encoded in the role of the craftsman through requirements for honesty and purity in the use of material such as gold, combined with a duty to educate and pass on skills (Sennett 2008). Craft originates in a sense-making activity through the manipulation of local materials, leading to the development of place-based specific skills and expressions that inform cultural identity (Dillon 2018). The long history of craft practice as a dialogue with the environment still organises much contemporary craft theory and practice today. Museum display panels routinely present mimicry in the form of works ‘inspired by nature’ as self-explanatory, leaving the concept undiscussed. Figure 4.18 from Aberdeen Art Gallery is typical in emphasising technique, followed by a brief decontextualised outline of the nature subject. The hand-made persists as a shorthand for undefined notions of value and authenticity, even as the emphasis on process has separated craft from fine art.



Fig. 4.18: 'Inspired by nature' display, Aberdeen art gallery. Katherine Pogson June 2024

This is not to denigrate the skill of the craftsperson, but to question the complacent aesthetics of natural symbolism. Encountering basketmaker Joe Hogan's⁹⁶ giant moss nest at Collect 2013 (Saatchi Gallery) gave me the uncomfortable feeling that an entire Irish hedgerow had been uprooted and transported to the King's Road in the name of some kind of 'authenticity' (figure 4.19). The contrast with Holden's display in figure 4.8 is to do with the deliberate stripping away of context to fetishise material and manipulation. Metalworker Junko Mori displays extreme skill in her ability to forge iron and silver into frond-like forms (figures 4.18 and 4.20) such pieces are no doubt highly desirable, yet I contend that a 'preoccupation with organic forms inspired by nature' (signage in figure 4.18, Aberdeen Art Gallery) requires a more robust interrogation.

⁹⁶ <https://www.joehoganbaskets.com>



Fig. 4.19: *Tribute to the Eagle*. Heather twigs, stems. 125 x 62 x 120cm © Joe Hogan 2018

A celebratory response to natural forms in craft might equally be described as natural appropriation: an extractive practice that presents the shorthand of a connection with nature through materials as an undiscussed 'good'. Yet, if craft is a central interface with the environment, the process, rather than the product, requires more consideration. I extend Glenn Adamson and Julia Bryan-Wilson's view of craft as an oppositional stance (2016) to examine its close relationship with constructs of nature, and suggest that craft can play an expanded critical role within ecological creative practice.



Fig. 4.20: *Organism - Crystal Nigella*. Junko Mori. Courtesy of Contemporary Applied Arts 2016

Craft has traditionally been considered a tacit language wherein social and cultural values are communicated through materials. Polanyi (1966, 4) stresses the bodily nature of tacit knowledge as that which is beyond conscious expression. For the craftsperson, this encompasses both sensory and cultural understandings, and the bodily means by which they are synthesised into material form. The work of craft practitioners, in contrast with that of fine artists, is habitually discussed in terms of material process rather than concept. A belief that the work embodies ethical values through ‘truth to materials’ is often assumed by the maker. In short, there is reluctance within craft practice to vocalise explicit underlying values.⁹⁷ Such values extend beyond the inspiration for products, to ways of life. While connotations of integrity and autonomy persist, the ‘submerged’ values of craft, with their focus on the haptic and the sensory (Frayling 2011), have been criticised as “relatively weak”, lacking an explicit or developed theoretical foundation (Malins et al. 1995, 3).

⁹⁷ With the exception of overt protest movements such as craftivism.

For curator and theorist Glenn Adamson, the idea of craft is a construct dating from 1750 rooted in the demotion of skill that resulted from industrialisation. Separated from holistic principles upheld by long-established guilds, craft was thought of merely as technical skill, representing ways of life under threat. Although arguably it was not mechanisation but the division of skilled labour into separate categories that made it exploitable, craft became presented as a cultural responsibility to maintain connection with an imagined past. Craft is therefore “an act of resistance” that allows fear of the loss of human habits and social organisation to be processed through narratives of tradition, preservation and continuity (2013, 191). Framed thus, craft is a way of working through the dialectic tensions of modernity, between collective action and individualism, encompassing both cultural memory and critique of the present. A recent volume of *Craft Research* dedicated to ‘Making as a response to crisis’ epitomises the normative concerns of craft theory and practice. Articles investigated disappearing crafts globally through a focus on place and cultural identity, alongside revivals of natural dyeing techniques using local flora (Niedderer et al. 2024). The preservation of disappearing ways of life is a persistent craft narrative, recalling the elegiac phase of ecological art discussed previously, and perpetuating similar ideals. Themes of nostalgia, shifting baselines and lost continuity also recall the debates within conservation outlined in 2.5, and the problems with devising ideal standards drawn from a mythologised past.

Theorist David Pye sought to counteract the nostalgia that surrounds craft, seeing this ideology as “a collection of prejudices” (1968, 62). To separate technique from mental knowledge and remove connotations of moral hierarchy from the debate, Pye discussed workmanship rather than skill. Workmanship encompasses different degrees of scale, investment in tooling and control, on a continuum that is not separate from industry. Valuing the imperfect handmade finish is a narrow cliché, misrepresenting the reality of actual workmanship. In his care to avoid categorising types of work, however, Pye falls into the trap of divorcing such workmanship from its cultural context and situated economic realities (Adamson 2007).⁹⁸ Alfred Gell later popularised the term ‘agency’ to communicate the effect

⁹⁸ In a contemporary example, I met Alis le May at a sustainable fashion workshop. In contrast to the performative sustainability of visible mending, Alis runs invisible mending sessions at Clothworks Glasgow C.I.C., where a torn jacket can be repaired and worn for a job interview: <https://www.clothworksglasgow.org>

of vitality created by the skilled artisan drawing the viewer into a sense of shared meaning, that then shapes social or cultural responses (1998). Ingold rejects this as a misguided attempt to reanimate what has been rendered dead by removing the artefact from its environmental connections (2010). Pye linked appreciation of “diversity” (the liveliness of the hand-worked process, recording a series of successive decisions made along the way to the artefact) to a longing for the variety that he perceived as being lost from the industrialised world. The suggestion is that craft recalls “the natural environment we have abandoned” (1968, 72), echoing current feelings about loss of biodiversity richness within the environment. The problem arises when a genuine feeling for quality and pleasure within craftwork or nature becomes a backward-looking fixed idea.

A quarter of a century after Pye, craft scholar Peter Dormer insisted on the “practical idealism” of virtuosity or skill for its own sake as a way of “communicating values”. Surgeon-craftsman Roger Kneebone calls these processes “gestures of thinking”, physical manifestations of a thought process that help the maker, and viewer of the artefact, to move between distinct levels of understanding, which may include social or political contexts.⁹⁹ Reacting to the devaluing of craft in the twentieth century outlined by Pye, Dormer wanted to credit the artisan with more aesthetic freedom. Yet he does so by identifying the maker’s “intention to delight, desire to honour” a “client or some other, more abstract or metaphysical entity” (Dormer 1994, 93, 89). The typical reticence of the craftsperson, hoping that ‘the work will speak for itself’ is aptly caught, but the servility of Dormer’s language suggests a hierarchy that diminishes the scope of the creative intention he is trying to reinstate. Such inspiration is also not specific to crafts: the ‘client’ might be a fine artist whose work the artisan is fabricating for them, for example. Skill is associated with manipulation and therefore suspicion, perhaps one reason why fine art has deflected attention away from its means of production since the dematerialisation of the art object (Lippard 1973). However, Dormer also hinted that some craft processes, both cognitive and mechanical, are deliberately hidden from view to perpetuate an aura of magic (1994). Benedict

⁹⁹ Kneebone, Roger. “Interdisciplinary Practice Forum: Practice as Research session 2”, UAL live event, March 18 2022.

Singleton¹⁰⁰ points out that ‘craftiness’ has connotations of cunning, from the Greek *mêtis*. He suggests that design’s ‘material’ is human behaviour, rather than organic compounds. The designer’s intentions go further than expressing values: they seek to influence society without arousing suspicion (2014). This aim is surely true of both fine art and craft (as well as policy ‘nudge’ tanks), and relevant to the motivations of this research. Rather than avoiding theory, craft hides its true political intentions behind other narratives.

4.3.2 The crafted object

In *Thing Theory*, Bill Brown explores the dynamics between humans and things we interpret as inanimate. When he says we “look through” objects, Brown means that we see only our cultural interpretation, using codes that have been previously established (2001, 4). However, crafted objects also communicate their ‘beyondness’, qualities that make them ambiguous or multilayered. Heidegger (1971) noted that our relationship to objects changes when they stop functioning as expected. When they become a ‘thing’, they draw attention to the relationships between humans and themselves.¹⁰¹

Artefacts contain more than our assigned cultural or historical interpretations of them as use, sign, or metaphor, layered as these are. In other words, “things leak” (Ingold 2010, 4). This is especially so in museum collections where they are separated from their original context. As an artisan, I ‘read’ the material and construction of the Pitt Rivers Museum objects and appreciated their patina and function, conscious that I knew little about their culture of origin, while guessing at religious, gendered and place-related meanings. My main impression was of a dynamic narrative about power relations between different modes of being. This is more than my projection onto the objects: it is a dialogue that occurred between us at the intersection of several cultural currents. Objects are caught up in our desires. “They are tired of our longing” says Brown (2001, 15).¹⁰² Readings of nature, alive in a different way, are similarly partial. The moths I encounter assert themselves as

¹⁰⁰ in a PhD thesis discussing service design in the Anthropocene, 2014.

¹⁰¹ A ‘thing’ as in *Althingi*, the ancient Icelandic parliament, is a meeting place.

¹⁰² Referring to the art objects of Claes Oldenberg.

more than, and outside of, our cultural interpretations. They are both familiar and inscrutable.

It is important here to separate the ‘agency of the object’ from biological more-than-human agency. Anthropology interprets the artefact as a communicative intermediary that ‘speaks for’ a human culture (Holbraad 2011). The notion of ‘extended cognition’ examines how cultural knowledge is embedded in ritual artefacts to “make visible a social ontology” (Pedersen in Henare et al. 2007, 141). Pedersen asserts that the intricacy of a Mongolian shaman’s costume sparks “momentary conceptualisation of social relationships which would otherwise remain unseen” during ritual practice. Artefacts function as ontological tools to access other perspectives and connections, as previously discussed in the work of contemporary artist Yondonjamts. His use of Mongolian shamanic practice, crawling inside an animal skin to dream, opened up an intermediate state that facilitated the probing of environmental concerns (see 4.2).

Psychoanalysing craft to reveal what is repressed by modernity, Adamson uncovers tropes of repetitive behaviour, false memories and flashbacks. Revivalism, most famously the Arts and Crafts movement, but also visible in the hipster phenomenon of the early millennium (Lanham 2003), epitomises these manifestations. Self-deception or reinvention (such as the adoption of a lumberjack persona by a deskbound graphic designer) serves the purpose of drawing attention to the psychic wound – in this case, separation from physical ‘masculine’ labour and a meaningful connection to ‘the great outdoors’ (York 2016). Anni Albers points out how modern industry, through its packaged conveniences, creates a form of tactile starvation that “leaves idle our sense of touch and with it those formative faculties that are stimulated by it” (Albers, 1965, 44). Modernity alienates humans from tactile sensibility, rendering material understanding undeveloped, creating an absence and a longing.

Material manipulation, thinking through making, is central to the way that the human species makes sense of experience, according to Tim Ingold. The process of understanding is an open-ended “correspondence” or communication with matter, rather than an imposition of preconceived form (Ingold 2013, 6-7). Therefore, the process is inseparable from the product – the physical act synthesises thought. In

delineating his own craft of anthropology, Ingold turns to Wright Mills, who, discussing the ‘intellectual craftsmanship’ of social science in 1959, insisted that “there is no division between method and theory” (Ingold 2008, 85). Ingold explored the connections between anthropology and art through the context of “practical activity”, craft-making and fieldwork, to underline how understanding is produced as part of a somatic engagement with matter in a situated context (2013, 9). Ingold wishes to reunite the two severed parts of craft, as Dormer before him – both suggest a more inclusive view of artisanal thinking. Dormer wanted to reprioritise artistic autonomy, whereas Ingold insists on the value of embodied knowledge as theory in action. Here, he finds an unlikely resonance with new materialism – the recognition that materials and objects have consequences for bodies, bodily experience and the construction of power – in that he presents thoughtful correspondence with matter as a relational “way of being” (2008, 85).

Nicolas Bourriaud extends the relational concept to the aesthetic function of art objects in a gallery setting, seeing it as essentially social (1998). An artwork’s value is its ability to catalyse conversations in a social context, rather than its technical or material worth, to open up spaces for dialogue about “ways of living and models of action” (5). Joshua Simon, drawing on Marx’s definition of commodity fetishism, believes that the art world should use the word commodity to describe art works, rather than “artifact” (“outcome or residue”), “piece” (just a part of the maker’s intention) or “thing” (“a mute presence that calls for contextualisation”), as these terms collude in obscuring the history of material flows and labour alienation, so that they can become vessels only for other symbolic ideas and values (2010, 6).

4.3.3 Craft practice

Linda Brothwell¹⁰³ extends her craft practice beyond the object to engage with social and theoretical issues. Brothwell began as a jeweller with an abiding interest in the restorative agency of tools. To shift the focus from the museum object to its relationship with the environment through use, Brothwell ‘cared’ for decaying ex-industrial buildings by inserting visible mending into the architecture (*Acts of Care: The Sheffield Edition*, Jerwood Makers Open 2013). *Handmade in Hull* (dir. Milner 2017), is a film conceived by Brothwell about endangered crafts and

¹⁰³ <https://www.lindabrothwell.com>

craftspeople in the city, made for the Hull UK City of Culture festival 2017. Her expanded practice included making tools for the featured craftspeople, and the accompanying exhibition *The Tool Appreciation Society* cannot be understood in isolation from the documentary that gave rise to them.



Fig. 4.21: *Catalogue for the Tool Appreciation Society solo exhibition*. Publication design: Lisa Robertson.
© Linda Brothwell 2017

The unfired clay sculptures of Phoebe Cummings¹⁰⁴ pay close attention to plant morphology and the accuracy of this is part of their impact. The site-specific works are made in place, in conversation with their environments and many of them are intended to biodegrade over time. The porous quality of unfired clay communicates a sense of breathing as it takes in moisture, or dries up, according to the water content in the air (figure 4.22).

¹⁰⁴ www.phoebecummings.com



Fig. 4.22: *Recipients (detail)*. Clay, wire, bucket. 200 x 150 x 80cm (approx). Phoebe Cummings. Courtesy of Fold Gallery 2018

Craft as a profession can thus embody strong ideas of resistance to the prevailing capitalist economy, a sense of autonomy that motivates many contemporary practitioners. Alternative views may play out through engagement with local, sustainable and ethical materials, or business models supporting community and education over mass production. Thus, the ‘lifestyle choice’ of craft becomes an ethical stance. Through ‘slow’ movements, maker/hacker spaces and social enterprises that promote alternative cultures of local production and co-operation, craft becomes an antidote to capitalism, enriching cultural life through resilience, psychological release and community-building. Such manifestations of craft as an “attitude” (Albers 1941, 3) are not backward-facing. Amateur craft shows the craving for more integration into daily life of those bodily processes of making described by Albers. Craft-ing for leisure is an extremely commodified form of consumerism masquerading as an escape, and the history of craft contains both labour exploitation and the promotion of leisure accomplishments as an ultimate luxury. However, ‘sloppy craft’ is less a lack of criticality (Cheasley-Paterson and Surette 2015) than a deliberate rejection of the commodification of artefacts,

preferring to celebrate non-monetary values such as the gift exchange (Hyde 1983).

To take part fully in the professional art or craft world requires institutional access, training, funding and ongoing support in a highly competitive and potentially exclusionary environment. These divisions reinstate the binary between professional and amateur that dates back to the origins of craft as a discipline, as does the educational set-up that still separates them. The deeper amateur elements of craft resonate with my presentation of citizen-science: both extend beyond leisure activities to dismantle barriers to participation in otherwise professionalised arenas, such as science and creative practice. Craft navigates a spectrum between embracing alternative economies and establishing professional orthodoxy through exhibitions, institutions and collectors. Craft can therefore function as a connecting device from imagined pasts to possible futures, and here its function coincides with contemporary art.



Fig. 4.23: *Earth's Skin*. Aluminium and copper wire. El Anatsui © Guggenheim Abu Dhabi 2007

Craft is no longer exclusively defined by what it is not, whether art, industry or hobby. Adamson suggests there has been 'a great convergence', bringing craft, design and art closer together through a mingling of material, ethical and contextual concerns that are not medium-specific (2017). In the post-disciplinary

moment, craft is subsumed within fine art as one of many languages and tools available for appropriation. As production methods in fine art are not routinely discussed, craft can prompt questions of whose labour, culture and skill is valued into art discourse. Considering the scale of the distributed workforce involved in global fine art production, contemporary artists have been described by Adamson as “working in the medium of other people’s labour”.¹⁰⁵ These workers are often anonymous, in contrast with the credits at the end of a film, for example. When craft processes are central to the impact of an artwork, as in El Anatsui’s huge hangings, ideas about employment, commerce, exploitation and regionality – ethical concepts – become part of the discourse (figure 4.23).¹⁰⁶ El Anatsui’s imported bottle-tops collected and wired together in Nigerian workshops are his ‘local materials’, more eloquent than a locally grown plant dye in this context.

Julia Bryan-Wilson identifies the contradictory nature of craft as a cultural phenomenon, listing its anachronistic, material, inclusive and resistant qualities as essential to its contemporary relevance (2013). Craft has been characterised as a reaction to modernity, sitting between art and industry, supplementary to one and a precursor to the other, while also institutionalised as a niche profession. Its increasing convergence with fine art provides an apt departure point to review its status in the context of ecological emergency. I argue that the environmental meta-context and the existential issues it raises are triggers for this post-disciplinary convergence. Craft’s narratives of opposition, with its escapist tendencies and material preoccupations, draw strong parallels with embedded attitudes to nature. Both project unconscious desires onto an imagined past, the boundaries of which are constantly shifting. The marginality of craft as a discipline offers a distance from which to critique modernity, and the idyll of retreat is both symbolic and self-conscious, a warning about escapism as much as a gesture towards a more ethical life. Not all craft is pastoral; however, even the upmarket

¹⁰⁵ a comment made at the event *Crafts Book Club: Glenn Adamson, Art in the Making*, Crafts Council, London, 8 September 2016.

¹⁰⁶ <https://elanatsui.art>

commercialisation in which I was involved,¹⁰⁷ traded, if subliminally, on what Adamson calls “pre-industrial legitimacy” (2007, 105).

In framing the invention of craft as a trauma response to the Industrial Revolution, Adamson makes a persuasive argument for its twenty-first-century role. Craft is not only avoidant, but can allow criticality to emerge, using its status as a connecting device between dreams of the past and fears of the future. The notion of craft itself, as Morton said of “nature,” may have to disappear in a truly ecological society (2009). The marginal position of craft in society is one of its strengths, making it “one of the most effective means of materializing belief” (Adamson 2013, 231). Applying the “expanded field” model from sculpture (Krauss 1979) to a craft practice embracing environmental concerns allows me to escape the commodification of artisan skills, as Krauss escaped the historicism of mid-century art criticism, through a postmodern rejection of medium specificity. Not everything can be materialised through the object, however.



Fig. 4.24: *Orange Shoelaces*. Wool, shoelaces, pipe cleaners and acrylic yarn, 28 x 16cm. Celia Pym 2016

¹⁰⁷ As espoused by the Crafts Council, New Craftmaker, Queen Elizabeth Scholarship Trust and Cockpit Arts, where I was based for twelve years.

4.3.4 Textiles

One of the ways that craft has been differentiated from art is through its perceived lack of conceptual and aesthetic rigour, often associated with domestic clichés about outdated homespun activities. Feminist art in the 1960s and '70s in Los Angeles brought textile art into the remit of the gallery, making the boundary between craft and art less distinct (Broude and Garrard 1994). Bryan-Wilson identifies how feminists used textiles, and the long history of feminine accomplishment and oppression that they represent, to open up conversations about materials, production, labour relationships and social organisation that still apply in the twenty-first century. The abject, gendered and devalued connotations of textile materials and processes were used as a tool to subvert and reclaim marginalised narratives of repair and maintenance, emphasise the inequality and sexism of the art world and question the public/private divide that excluded women, recalling the divide between amateur and professional discussed above (Parker 1984). Feminism also contributed participatory methods to the language of contemporary art that have become standard means of expression today (Bryan-Wilson 2013).

Today, acts of care expressed through textiles are interpreted as social metaphors for mending the fabric of society (figure 4.24). Contemporary artist Celia Pym¹⁰⁸ makes care and repair visible as a social act. In her longrunning *Catalogue of Holes* project, Pym conversed with strangers while mending much-used articles of their clothing, exploring the intimacy of placing her limbs inside the clothes of another to find the places that have been worn out. While the popularity of visible mending among sustainable fashion adherents is in large part due to Pym, the deeper impact of her work lies in transcending the mundane utility of mending to speak of community, memory and relationship, through the resilience of material values. Dant (2010, 1.4) points to the “complex human qualities... of gesture, emotion and sensual knowledge” involved in repair work, together with a requisite need for autonomy in the repairer. While Dant believes these qualities are unique to human creativity, I extend them to other life forms and, with Haraway (2016, 136) who wishes to “stitch together improbable collaborations” between species to redirect

¹⁰⁸ celiapym.com

energies for flourishing future living, argue that more-than-humans continually partake in processes of repair.

The domesticity expressed by textile crafts brings to mind the *oikos* root of ecology, quiet activities of maintaining the shared home.¹⁰⁹ Both in domestic settings and in relation to material collections and museum archives, the moth (except when instrumentalised for silk) is mostly regarded as a pest. The visual resonance between moths and textiles is shown in the wealth of vernacular names,¹¹⁰ but the association of moths with damage to archives and wardrobes is disproportionate. I use textiles in creative practice to confront human-centred damage and nuisance of the environment, and reverse the stereotypical view of insects as the destroyers of fabrics, furnishings and clothes (see Chapter Six) .

Chapter summary

This chapter examined prominent themes within mainstream environmental art practice, demonstrated the limitations of nostalgic and data-driven work lacking calls to action, and outlined the communicative potential of multimodal works that include social interventions (Cooking Sections), or suggest alternative futures (Humeau, Superflux). I evaluated practitioners engaging with other species to identify useful approaches applicable to my own work. Sensing that co-production with other organisms can re-instrumentalise the more-than-human, I focused on artists taking a critical approach to human/nature relationships. Holden, Dion and Coates juxtapose human and more-than-human cultural practices to question their value systems. Coates, with Whall and Thwaites, also uses bodily experimentation to imagine inhabiting the physicality of other species. Spriggs and Feral Practice immerse themselves in long and close attention to more-than-human lifeworlds to gain a different kind of embodied understanding – the approach that resonates most strongly with my own intentions. I showed how moths have been variously used to anthropomorphise violence to other species (Ashton), demonstrate the beauty and fragility being lost from ecosystems (Gillespie) and draw humans into a better relationship with wild organisms (Imlach).

¹⁰⁹ *Oikos* referred to the house and household in ancient Greek.

¹¹⁰ Scorched Carpet, Brussels Lace, Beautiful Brocade, Satin Wave, Netted Pug, Flounced Rustic, Silky Wainscot.

Finally, I presented my critique of craft based on natural forms as prone to weak conceptual development. Adamson frames craft as a powerful way to link fears about disappearing cultural values with debates about future ways of being. I find this quality is highly relevant to developing ecologically- and critically-engaged craft practices. I delineated the specific ways that textile connotations of repair and visible labour can harness craft's oppositional power to communicate values of care, community and alternative economic systems. In my work, textiles can communicate the capacity of the more-than-human to maintain, transform and heal, patiently stitching the environment back together.

Chapter Five – Theories and Methods



Fig. 5.1: *Injured Lime Hawk moth (Mimas tiliae) caterpillar, 15 August. Katherine Pogson 2019*

Part of the joy stems from the consciousness of our intimate relation to something bigger than our ego, something that has endured for millions of years and is worthy of continued life.

– Arne Naess, *Self-Realization: An Ecological Approach to Being in the World*. In *Applied Ethics: Critical Concepts in Philosophy*, Volume 4, edited by Ruth F. Chadwick, Doris Schroeder, Taylor and Francis 2002, p.206

This thesis asks how creative practice can promote a decentred relationship with the more-than-human. The literature review synthesised understandings from three areas of critical discourse. Feminist environmental philosophy (Plumwood, Haraway, Puig de la Bellacasa) and post-anthropocentrism (Braidotti) outline relational ontologies that expand social and cultural considerations beyond human-centred concerns. In dialogue with social science thinking on care (Tronto, Gilligan) they inform the anthropological fieldwork of multispecies ethnography

(Kirksey and van Dooren, Kohn), which, through immersive experience, provides a practical pathway towards my first aim of decentring the human within environmental relationships.

Ingold points out that theory and method are inextricable (2008). Therefore I have combined these two parts into a single chapter. The theoretical framework outlines four thematic concepts distilled from the critical reading and fieldwork experience. The methodology shows how these were applied through a reflective ethnographic practice, to develop further in creative practice.

5.1 Theoretical framework

The otherness of moths challenges normative ideas of social organisation, making them useful in examining conceptions of biopower. Closer study of overlooked organisms provides a more granular understanding of ecosystems (Robertson et al. 2021). However, these are only abstract notions until applied directly to individual meetings with wild creatures. Personal interactions present ethical dilemmas that heighten emotional sensitivity and challenge normative behaviour. Together, these readings focused my attention on how to live companionably with moths, and how to communicate what is understood through the attempt. My creative practice narrates personal curiosity, clumsiness, selfishness and ignorance, to trace a sensitising process that implicates me in the process of shared world-making. During the extended fieldwork period, I developed four key concepts that inform an approach to creative practice: *critical anthropomorphism*; *companionship*; *care*; and *letting go*. The themes draw attention to the marginal and overlooked, consider what habits of thought and action might be set aside to live in relationship more equitably, and elaborate on acts of care and nourishment.

5.1.1 Critical Anthropomorphism

A touch of anthropomorphism, then, can catalyze a sensibility that finds a world filled not with ontologically distinct categories of beings (subjects and objects) but with variously composed materialities that form confederations.

– Jane Bennet, *Vibrant matter: A political ecology of things*. Duke University Press, 2010, p.99.

Anthropomorphism has been described as the projection of human emotions and character traits onto the other-than-human (Morton et al. 1990). This begs the question of how to define exclusively human characteristics. Consciousness and language are often used to attempt to distinguish between human and other. Nagel (1974) showed that the impossibility of humans understanding what it is like to be a bat does not deny them consciousness of their own being. Detecting consciousness as a measure of aliveness is problematic; even as definitions expand, they remain based on human bodies, senses and assumptions. Plumwood points out that attributing human qualities to nonhumans (*anthropomorphism*) is distinct from assuming that qualities such as consciousness belong *only* to humans (*anthropocentrism*) (2002, 56). Such ‘anthropodenial’ prompts the adoption of mechanistic language to avoid projection, rendering the more-than-human passive in the process. Any attempt to ‘speak for’ those beyond human language confronts problems of translation across apparatus boundaries. For Plumwood, such ‘weak’ anthropocentrism is relatively harmless, as long as the difference in modalities are not entirely erased (58). For new materialist Jane Bennett, anthropomorphism usefully reframes the physical world as shifting coalitions of materialities, rather than separate entities (2010).

Fredrik Karlsson agrees that confusing anthropomorphism with anthropocentrism stifles debate, and qualifies the definition of anthropomorphism by inserting “believed to be” between “characteristics” and “human” (2012, 708). Rather, a more critical anthropomorphism can be a powerful communication strategy (2012). In 1985, Burghardt used the term ‘uncritical anthropomorphism’ to lobby for the inclusion of subjective methods into a multimodal scientific ethology that nevertheless needed to test specific capabilities of the more-than-human. Art practice, less concerned with proof, can go further. Critical Art Ensemble do not even differentiate between anthropomorphism and anthropocentrism, seeing both as “affirmational” tools for motivating positive environmental engagement (2018, 36). My research defines critical anthropomorphism as a strategy of deliberate imaginative projection onto the more-than-human to reveal points of connection

and difference. Critical anthropomorphism combines observation and empathy to test Karlsson's hypothesis about effective communication. Comparisons, and the futility of comparisons, are useful for expanding human understanding. As a conceptual tool I use it to challenge stereotypes of unimportance, pestilence and fragility in relation to moths, through texts that highlight encounters with resilience, regeneration and energetic life force.

In my work I resist the performative approach to 'becoming-with' moths employed by Coates, Thwaites and Whall to avoid reinstating the human body as primary. Instead I explore the sometimes comical limits of empathy. The video with spoken-word *Nourishment* shows how learning to rear caterpillars unravels previous simplistic understandings of care. The video *Towards Light* presents two separate perspectives simultaneously – the lepidopterist's baffled anthropomorphic speculations on romance, sustenance and migration contrast with the moth's alternative sensory experience. In textile practice, the material probe of the companion object challenges relations between different modes of existence through the communicative power of object-making (*Corpse cone* figure 6.31, *White Plume* figure 6.34). In creative writing, I highlight how the attempt at empathy may be more important than scientific accuracy to promote ecological understanding (*Towards Light*). Including my ignorance, naive assumptions and wrong guesses shows how both the inevitability and limitations of anthropomorphic projection seed the development of ecological literacy.

In summary, in a time of ecological emergency, critical anthropomorphism is a timely tool for rethinking species boundaries. Acknowledging the potential for self-deception through projecting a human-centric view, understanding that the human is always implicated in encounters with the other, critical anthropomorphism still tries to bridge the gap, not just to understand the other, but to recalibrate concepts of living in relationship to them. As Raffles pointed out, "what else have we got?"¹¹¹

¹¹¹ Raffles, Hugh. "Political Entomologies" Online seminar. University of Cambridge. 15 March 2021.

5.1.2 Companionship

Beings do not preexist their relatings. ...Subjects, objects, kinds, races, species, genres, and genders are the products of their relating.

– Donna Haraway, *The Companion Species Manifesto: Dogs, People, and Significant Otherness*. Chicago: Prickly Paradigm Press, 2003, pp.6-7.

How might an ethics of companionship be promoted through creative practice? Bearing in mind that cultural contexts differ and are specific to place, my practice examines what “an ethically responsible relationship between different species” might involve (Heise, 2016, 200) by telling stories of encounters with wild creatures to create empathy. This is achieved through exploring narratives of care, guilt and responsibility, informed by an embodied acquisition of ecological literacy. In discussing planetary food security, environmentalist George Monbiot recalls the origin of the word companionship in the Latin for sharing a communal meal – *con pane*, with bread.¹¹² An emphasis on nourishment as a non-solitary activity involving the sharing of both effort and abundance is relevant when habitat destruction is a major threat to native wild species¹¹³ and human food security relies on co-operation with the same.¹¹⁴

In the quotation above, Haraway contrasts the posthuman cyborg construct with biological companion species to discuss the social and embodied nature of cross-species relations. She insists on the independent agency of the more-than-human, beyond their use as metaphors to think through human situations, while stressing that our differences are nevertheless co-created through ongoing interaction between species. My initial image of tied-together objects presents the tension of communication across differences.¹¹⁵ The companion object

¹¹² Monbiot, George. “A New Politics for an Age of Crisis.” RSA 5 July 2018.

¹¹³ Eight of the most rapidly declining Scottish moth species between 1990–2014 are associated with moorland, suggesting disproportionate decline in this habitat (Dennis et al. 2019).

¹¹⁴ Moths underestimated as significant night-time pollinators: “Current pollinator research in agriculture focuses largely on diurnal pollinators, yet the evidence for pollination by moths and other nocturnal pollinators is growing” (Robertson et al. 2021, 2155).

¹¹⁵ The origin of my concern with relationships between human and more-than-human others is described in the Prologue.

term presaged engagement with the relational ontologies of Barad, Haraway and Plumwood.

Karen Barad demonstrates the physical reality of “intra-action” between particles at the fundamental quantum level. Barad extrapolates this to suggest that ethical relationships involve “*responsibility... for the lively relationalities of becoming of which we are a part*” (Barad 2007, 393). The light trap apparatus represents Barad’s agential cut, filtering a certain ecological assemblage at a particular time and place. Its effect is partial; only moths near enough *and* attracted to light will be caught, and not all of those. The trap sets in place a series of intra-actions that ripple through and beyond me and the moths. Birds consume, wasps parasitise, moth recorders and scientists interpret the data, and people are touched, perplexed and repulsed by my work. Some moths are prevented from procreating by their temporary entrapment, others experience a tiny population boom through my egg-rearing activities. Briefly delayed in their defoliating, pollinating and migrating activities, the moths energise me to care for and communicate about them. In each encounter there is a correspondence that as a human, I cannot fully know. I can only become more aware of the possible ramifications of my activities, and channel the energy of the intra-actions themselves onward.

Haraway’s exploration of multispecies companionship requires thinking through the ethical implications of living with diverse life-forms. Plumwood outlines cultural practices as the key arena for change. These concepts delineate my research question of how creative practice might promote a decentred human relationship with the more-than-human.

5.1.3 Care

When a government and or a society and or a world keeps ignoring and patronising and dismissing something that you believe in, a person might start to question if they’re wrong to care so deeply about that thing.

– The Nature Library, Substack, 27 September 2023.

The Nature Library quote above addresses how repeated signals from a prevalent culture which does not value environmental care sufficiently, as evidenced by political U-turns on energy policy, and draconian sentences for environmental protesters (Nevett 2023), can exhaust creative practitioners and activists who seek to promote an alternative view. Therefore an attitude of resistance that insists on other ways of seeing planetary co-existence are valid – especially marginalised views – involves persisting in acts of care for subjects which society often deems trivial, to stand up for them.

In the Coda to *Matters of Care*, Puig de la Bellacasa worries that presenting microbial soil remediation as care may be criticised as “wishful” anthropomorphism (2017, 218). Concerned about accusations of appropriation and projection, she invokes Barad in her defence. Barad (2007) argues that, if ethics are an ongoing way of being rather than simply the articulation of an intention, they may not be exclusive to humans. Gilligan presented care as an act of resistance to the inequality of dominant social value systems (1982). Rose underlines this in relation to biological conservation by reiterating that care is an “ongoing assumption of responsibility” to stand up to violence (2017, 58). Tronto and Fisher required an ethical appreciation from the carer of the subject position of those being cared for (1990). Puig de la Bellacasa emphasised care as a more-than-human activity with the power to remediate ecosystems (2017). A concept of care combining these three elements – resistance, ethics, and extension to the more-than-human – coalesced during my fieldwork as a guiding approach to creative practice. An approach to care develops from examining the ethics of relationships forged through companionship. Two different experiences of caring, for my mother at the end of her life, and for numerous moth broods at the beginnings of theirs, informed a reflective autoethnographic methodology, culminating in creative writing as a strand of practice.

Helping to care for my mother as she succumbs to Parkinson’s Disease has been a background context, mirroring and interrupting the timeline of this research over nearly a decade.¹¹⁶ As I reflected on planetary care through my fieldwork, her parallel decline revealed connections between the two states. Clearly there are great

¹¹⁶ I am not the primary carer, but I travel to provide support four days a month, and have taken extensive time out of the research during several periods of crisis.

differences between caring for a terminally ill person and trying to care for declining species where the possibility for improvement remains. But, could conservation of wildlife simply be a type of palliative care if the macro conditions for survival are not being met and planned for? Rather than draw direct comparisons between the two states, I use care as a framework to foreground qualities of experience thrown up by resonances between the activities. Alongside the provision of immediate needs, the practice of human care involves vigilance to predict and guard against future damage. The habit of vigilance can come close to excessive control. Power imbalances influence decision-making that may be personally convenient rather than altruistic. Shifting baseline syndrome, the acceptance of altered states such as depleted bio-abundance or mental deterioration as normal, throws up concerns about defeatism and complacency.¹¹⁷ Fragmentation, which might simply be called suffering, becomes normalised. Acceptance of shifting baselines co-exists with a contradictory lag between memory and present reality. The unpredictability of deteriorating capacity gives rise to a related temporal dissonance. Both carer and patient are disoriented by a sense of multiple timescales layered in the present – a state analogous to ecological solastalgia and climate-anxiety. What is being lost cannot be grasped in its totality; unease is born in the friction between what to accept and what to fight for. Recalibrating personal priorities to support the requirements of other life-forms is key to decentring the human in ecological relationships. Ethics tend to be based on human-centred affinities, however. What practices does care involve when affinities are stretched to their limit, and who is responsible for meeting them?

In the NHS, medical need is the sole principle for funding individual primary healthcare. A *Continuing Health Care Assessment* evaluates twelve bodily processes and capacities¹¹⁸ using three criteria: *complexity*, *intensity* and *unpredictability*. A person's capacity to carry out basic functions is assumed as a fundamental baseline, while recognising that these capacities are not separate from each other. In practice, cash-strapped assessment teams cannot always separate perceptions of

¹¹⁷ For those born since 2012, the bio-abundance in the world, the number of living creatures, has halved, in comparison with those born before 1970. Living Planet Index Report, 2016, World Wildlife Fund. <https://www.worldwildlife.org/pages/living-planet-report-2016>

¹¹⁸ Breathing, nutrition, continence, mobility, communication, cognition, behaviour, altered states of consciousness, psychological and emotional state, ability to take medicine, and to keep clean.

external support (such as unpaid family care or assumptions of wealth) from their judgements of individual capacity, leading to downgraded assessments of severity and consequent refusal of funding. In this way, some aspects of end of life care do not qualify as a socially-supported activity (Eley 2022, Morgan 2020). Such evaluations raise the question of how to calculate when the ability to support life has broken down, when to intervene, and how to apportion responsibility. Reflecting on this framework in the context of planetary care therefore highlights human value systems.

Complexity, intensity and unpredictability are terms frequently applied to anthropo-generated impacts of the ecological emergency, such as hurricanes and storms (Otto 2024). As with the *Continuing Health Care Assessment*, quantifying levels for action can be contradictory: limits are used both to highlight urgent necessity for action through delineating planetary boundaries (Richardson et al. 2023), and, analogous to the shifting baseline syndrome, redrawn to push goals into an indeterminate future, as at the recent COP16 biodiversity summit in Colombia (Greenfield 2024). Through extensive work with endangered birds, Thom van Dooren has developed an approach to interspecies care that centres on “witness, hope and inheritance” (2014, 291). The tension between personal responsibility for lives interfered with, and letting go of the urge to control, emerged as a strong focus during my fieldwork. I identified themes of *damage, difference, nourishment* and *care* to reflect on through creative writing (discussed in more detail in the next chapter). Clumsiness and ignorance when first encountering moths in my light trap led to a heightened sensitivity to damage: I stepped on moths, severed legs in the lids of jars, and felt responsible for drownings, parasitism and other deaths. Relating these to the causes of moth species loss at scale (light pollution, habitat loss, intensive agriculture and pesticide use) induced a sense of human shame, revealed in part by analysis of the data I contributed to Butterfly Conservation (Randle et al. 2019). Damage is not the whole story: wildlife adapts and thrives as changing circumstances bring opportunities to some. However, overall the scale and speed of depletion is shocking. The remorse arising from prioritising my selfish curiosity over the safety of wild lives gave rise to self-restraint, and an active bodily process of learning to nurture by paying closer attention, and physically taking more care.

In summary, human concepts of care can be extended to the more-than-human, based on the same relational ethics that govern the power differentials between carer and cared for. The conversation between parallel experiences of human and more-than-human care sheds light on aspects of each from a new perspective. Articulating the value systems of care, and navigating issues of control, shifting baselines, and attendant suffering, is in itself an act of resistance to the prevailing culture, which I explore through autoethnographic reflection and creative writing.

5.1.4 Letting go

In the end, it seems that power has less to do with pushing leverage points than it does with strategically, profoundly, madly letting go.

– Donella Meadows, *Leverage Points: Places to Intervene in a System*. Sustainability Institute, December 1999, p.19.

In assessing the relative effectiveness of points of intervention in a complex system, Donella Meadows notes that humans have an instinctive awareness of the nodes where influence is possible, yet almost as unerringly push the levers in the wrong direction. Her hierarchy of leverage points initially placed “the mindset or paradigm” informing the system at the top (1999, 2). Later, she superseded this with “the power to transcend paradigms”, concluding that knowing when to relinquish control has an even greater impact (3). Her text provided the title for a research exhibition, *Places to Intervene in a System* by the UAL Posthuman reading group in 2021 (discussed in Chapter Six).

As a theoretical framework for this research, the concept has three aspects. The first addresses the cultural beliefs that creative practice can interrogate. *Letting go* is the central challenge for decentring the human in ecological assemblages, giving up habits of thought, behaviour and labour that are not consistent with multispecies flourishing. This is relevant to both the creative practitioner and their intended audience. While giving up control might sometimes include supporting habitat restoration through the active reintroduction of keystone species and management of invasives, alongside dedicating suitable tracts of land to rewilding (Wilson 2016, 175), letting go of ideas about nature also requires conscious examination of what underlies desires to both make and consume. Saffo’s theory of

economics identifies a scarcity of meaning as defining a new Creator Economy, overlaying the consumer economy based on a scarcity of desire (2015). Unpicking the link between desire and meaning suggests that the economy of desire diverts the creative urge, channelling it instead towards excess consumption. Lacking meaning, consumption is a temporary pacifier, and the cycle starts again.

Critically dismantling cultural habits can involve a queasy sense of having been complicit in the processes that we wish to denounce, a process of unlearning that Rogowska-Stangret calls “anthropo-de-centering” (2019, 833). But, on a geopolitical level, adopting principles of degrowth that challenge the massively inefficient resource use driving the capitalist economy, based as it is on inequality and exploitation (Hickel 2022), does not necessarily imply the *via negativa*. It can, through a change in values, deliver a more equitable existence globally for humans aimed at “frugal abundance” (Liegey et al. 2020, 7). Through scaling up socially necessary support structures for basic needs, diverse communities of life can be safeguarded. Cultural paradigms can be transcended by revealing the usually obscured links between planetary health at a species level, and human economic activity.¹¹⁹ If the system in which this research wishes to intervene is the human-centred approach to nature, creative practice can speak to the alienation produced by urban living, and draw attention to the shifting baseline syndrome that makes plummeting biodiversity seem normal. My practice seeks to activate such cultural conversations using both empathetic narratives and inversion techniques that recount personal experiences to deconstruct received opinions about nature, using moth recording as a portal.

Secondly, *Letting go* informed the genesis of this research in my own craft practice, beginning at a point where I had concluded a material practice of fifteen years. To navigate new academic and creative territory, I had to embrace the loss of previous professional status and reliance on accumulated knowledge. Disorientation is a necessary part of the creative journey. Rebecca Solnit suggests the difference between science and art is that, while both explore the boundary of the unknown, scientists transform the unknown into the known, whereas artists drag their audience out into the “dark sea” of the unknown to experience it (2006, 12).

¹¹⁹ Cross, David. “Get Well Soon: Planetary Health and Cultural Practice.” Social Design Institute presentation, UAL, 22 September 2020.

Meadows states that it is behaviour, rather than stated intention, that reveals true purpose (1999, 14). For me the ethical need to eliminate outmoded habits, expressive forms and outcomes shifted the focus from the object being made to what is understood through the research experience as an end in itself. This is not to deny the emotive and conceptual power of the art object, however. For the exhibition *What is Luxury?* (2015), Marcin Rusac and Iona Inglesby designed “a toolkit for getting lost”. Their knapsack, without compass or clock, envisioned escape from time-management as an ultimate luxury, a way of reconnecting with the “basic primal instinct” of body clocks and wayfinding (Inglesby 2013). Such simplification of our needs celebrates a profoundly liberating and expansive embodied self-reliance, resonating with Haraway’s Chthulucene concept, which embraces the chaos of destabilising more-than-human forces to pass through the boundary event of the Anthropocene (2016). At the same time, it partakes in a privileged fantasy about getting lost in the wilderness that perpetuates ideas of nature as a leisure amenity for the lone hero.

Finally, *letting go* provided a focus for chronicling what I learned through the lived experience of fieldwork with moths. I became aware of the selfishness of my curiosity and the damage my desire to interfere in moth lives sometimes produced. While these understandings altered my behaviour, I found I could not complete my materials-based projects satisfactorily. The act of situating myself within the research enquiry required the development of a fresh personal creative vocabulary to recount the narrative of the research journey and communicate the understandings gained.¹²⁰ I had to let go of the anonymity of the object-maker, and self-consciously include myself in the work through video and writing. This journey mirrors the cultural unlearning that my practice seeks to contribute to, provoking critical debate of alternative perspectives. The decentring approach challenged me not to instrumentalise, appropriate or take shortcuts to ‘represent’ the more-than-human. I extend Morton’s deconstruction of ideas about nature to the way that moths have been used as signifiers and metaphors of human-centred concerns. I present alternative views of the lives of moths on their own terms, and examine the ethics of personal interactions with them as a way to rethink

¹²⁰ Contributions to knowledge in this thesis are described as ‘understandings’ rather than ‘findings’ in terms of new knowledge.

environmental relationships from a micro level. The effort of not instrumentalising requires an iterative practice of undoing habits of thought, working to recognise embedded anthropocentrism as part of its methodology.

The four theoretical concepts outlined in this chapter each offer ways to frame an approach to creative practice that fosters a multispecies sensibility. *Critical anthropomorphism* rejects the political correctness that reinforces species boundaries, providing an empathetic tool that is nevertheless aware of its limitations. *Companionship* presents multispecies co-operation as a practical tactic for survival, as well as a fruitful site for cultural enquiry. Building on fundamental biology (Margulis, Haraway), companionship provides a mental guide to communicating across differences of apparatus and culture, with the relationship as a central focus. *Care* recognises that the essential interreliance of different life-forms requires an ethical approach. Further, it insists on the validity of overlooked and marginalised subjects as legitimate areas for creative and academic practice, as a site of resistance to prevailing consumerist and capitalist culture. *Letting Go* suggests a profound undoing of entrenched cultural habits of thought and action is required to live with and through ecological emergency, extending this also to predefined approaches to creative practice and academic enquiry. Together, the four concepts guide and inform the methodologies adopted in this research, which are developed in the next chapter.

5.2 Methodology



Fig. 5.2: *Light-trapping for moths on Skye*. Photo: Paul Wood September 2017

To practise this method is not to describe the world, or to represent it, but to open up our perceptions to what is going on there so that we, in turn, can respond to it.

– Tim Ingold, *Making: Anthropology, Archaeology, Art, and Architecture*. Routledge, 2013, p.11.

This practice-based enquiry makes use of three central methods in its mission to expand craft-based practice to communicate a decentred human relationship with nature: environmental fieldwork, autoethnography and creative process as research. The fieldwork took place on my London roof, and on holidays in the UK seasonally between 2016–2022. Journalling functioned as a bridge between the fieldwork and the creative practice, providing a space for reflection, developing into a multispecies autoethnographic method focused on specific moth trap events and subsequent records of rearing caterpillars. The practice began as material investigations using textiles and expanded to include moving image, collaboration and creative writing, investigating themes that emerged through analysis of the collected material. The practice outcomes are discussed fully in the next chapter.

The four theoretical concepts of *critical anthropomorphism*, *companionship*, *care* and *letting go* outlined above inform my active application of the three methods through an ethical approach to decentring the human that places making artwork secondary to the ecological learning process. *Critical anthropomorphism* involves self-aware projection of empathy and challenging human-centred boundaries. *Companionship* emphasises how to live with the more-than-human and co-operate across difference. *Care* stands up for the marginalised and resists cultural pressures and practices that damage. *Letting go* undoes habits of thought and action that prevent the full exploration of a decentred sensibility in relation to the more-than-human.

5.2.1 Fieldwork



Fig. 5.3: Insect identification with 'Bugman Jones', Woodberry Wetlands. Katherine Pogson 2016

Fig. 5.4: Emperor moth (*Saturnia pavonia*) female. Skye, 10 May. Katherine Pogson 2016

But why should I make a list? It serves no purpose, and they are all in the books. But they are not in the books for me – they are in living encounters, moments of their life that have crossed moments of mine.

– Nan Shepherd, *The Living Mountain*, Canongate Books, 2011 [1977], p.67.

Moth-recording in the UK is a key conservation tool for tracking how wild populations respond to habitat loss, pesticide use, light pollution and global heating. The Aurelian butterfly-hunter's killing jars and net have been replaced by photography.¹²¹ While still seen as an eccentric pastime by some, the focus for the twenty-first-century moth-hunter has moved from classification to conservation. Completists enjoy ticking off life-lists, but fulfilment also lies in contributing to one of the longest-running biological surveys in the world. Citizen-science fieldwork performs three functions: data collection, awareness-raising and community-building. Wildlife populations have fallen 69% on average since 1970 (WWF 2022). Urban human populations are expected to grow to 68% by 2050, by which time 90% of the UK will be urban (United Nations, 2024). With this change in

¹²¹ In some cases positive identification of species is only possible via dissection of genitalia. Voucher specimens are sent to experts in these infrequent cases, applying mainly to micro moths.

living conditions, disconnection from nature will increase. Changes in bioabundance are less noticeable to urban populations, and their significance for the ongoing viability of ecosystems that support life can therefore be underestimated. Behaviour change in the general population requires a more intimate knowledge of how different life forms interact to create a liveable biosphere. This research draws attention to a wider network of mutually supporting biological assemblages, to enhance multispecies understandings.

The mechanics of moth recording were described in The Light Trap Apparatus (1.3.1). At night, a light box attracts a representative portion of nearby moths that are identified and counted early the next day, and safely released. The data is submitted to the county recorder for collation by Butterfly Conservation, informing ongoing research activities. My personal process is described in more detail below. Not all moth-species are drawn to the light; other insects such as beetles and predatory wasps may also be attracted. The act of ‘shining a light’, partial and inexact as it is, nevertheless builds understanding of the interrelationships that sustain healthy ecosystems over time. Seasonal fluctuations and periods of gestation are an essential part of this durational project. The speed with which change happens in species distribution, immigration, abundance, and decline is visible, however, even within short periods of time.¹²²

The activity also shone a light on my own carelessness and ignorance, confronting me with direct evidence of the ease with which ‘slow violence’ can be enacted (Nixon, 2011). In doing so, the apparatus provoked a transformative reflection on the ethical responsibilities and skills required in meetings between species (Haraway 2007). Although its purpose is to inform protection at a population level in the longer term, even my most careful actions on occasion caused inconvenience, damage and even death to individual moths. Compensating for unintended consequences drew me into labours of care for eggs sometimes laid in

¹²² “Several former immigrants... have become established residents in very recent times. ...Tree-lichen Beauty *Cryphia algae* (first record 1987, then one in 1996, but from 2003 abundant) and the White-point *Mythimna albipuncta* (2000, 2002, then 2006 onwards). ...are species that we might have been willing to kill for when I was actively collecting back in the 1980s; today they are ...without doubt breeding residents.” Colin Plant, Herts & Middx. County Recorder, Moth Mumblings email, 3 August 2022).

the trap. Moth recording becomes a sensitising and a sense-making activity embedded in a specific place.

Citizen-science projects create communities that encourage and legitimise group efforts to understand and protect biodiversity. The National Moth Count, Big Butterfly Count and Garden BirdWatch provide platforms for pooling, streamlining and scaling up otherwise piecemeal data-gathering methods, while offering practical tools that activate amateurs to learn independently. Importantly, such schemes provide public platforms wherein care for the more-than-human can be seen as a joyful, accessible activity rather than a burden. As a volunteer at London Wildlife Trust, I have recorded species, run identification sessions, taken part in bioblitzes¹²³ and contributed to crowdfunding the Moth Atlas (Randle et al. 2019).¹²⁴

Fieldwork as more-than-citizen-science

Humanities scholars, uncomfortable with the disciplinary dualism that still seems to divide scientific knowledge and artistic meaning, embrace uncertain ways of knowing as a methodology for counteracting dogma. Knowledge is seen as “the agent of different forms of resistance” (Birdsall 2009, 8). The sentiment informs my interpretation of citizen-science as a tool for decentring the human. The development of citizen-science was discussed in 2.6, where its shortcomings in terms of evaluation and exploitation, and its opportunities for awareness-raising and public motivation, were outlined. Here, I probe its expansion into an active artistic practice that can challenge professional boundaries, combat eco-anxiety and influence social behaviour.

Citizen-science builds on a long history of the amateur naturalist as knowledge-generator. Notable natural history pioneers Gilbert White and the ‘father of entomology’ Jean-Henri Fabre worked independently with limited means and equipment, improvising through observation and curiosity. The self-trained individual continues to play a significant role in pushing the boundaries of natural history knowledge, through digital data-collection and fieldwork, despite limited

¹²³ A bioblitz is an intense ecological survey of a defined area carried out over a short period to ascertain how many species are present.

¹²⁴ Published in 2019, the Atlas collated 25 million records dating from 1970.

formal scientific education.¹²⁵ In this way, citizen-science links us to the time before modernism, just as Anthropocene thinking dismantles that idea of progress. As Adamson noted regarding craft (4.3), citizen-science can act as a connecting device back and forward through time, activating public efforts for ecological continuity, and imagining alternative value systems for living.

Craft values have much in common with the autonomy and self-reliance of the amateur naturalist. Craft practice embraces the self taught and vernacular, including methods sometimes deemed unrigorous (Cheasley-Paterson and Surette 2015). In reality, this pinpoints a difference in value systems. As an artist, my aim in collecting moth-related data is to expand what is recognised as knowledge, by asking: what is missing from the record? Ignorance of paradigms can generate different kinds of questions and develop alternative schema. For this reason, I include in my journals and scripts the mistaken assumptions that reveal my lack of biological training as a deliberate method to highlight the learning process. Gilbert White thought for a long time that swallows must hibernate underwater in the winter (1789). His curiosity brought the epic migration of birds, then unknown, into focus, expanding consideration of what might be possible.

Involvement in citizen-science can counteract the paralysis that alarming environmental news sometimes engenders. In the face of growing ecological anxiety, citizen-science can democratise knowledge, dismantle barriers and create an entry point through lived experience. In turn, this has the power to disrupt hierarchies in a positive manner, reversing some aspects of the professionalisation of science that contribute to dissociation from the natural world among urban populations. This is not to reject scientific rigour, but to present valid alternative ways of engaging with ‘nature’ that include the experiential.

Fieldwork as feminist situated practice

Knowledge claims need to be grounded somewhere specific, according to Haraway (1988). A situated perspective, honest about its limitations, allows knowledge claimants “to become answerable for what we learn and how to see” (373). This

¹²⁵ Patton’s Tiger, and Softly’s Shoulder-knot, discovered in the early 2000s, are named after UK amateur moth-spotter. I submitted the first London record of *Bisigna procerella* to the County Recorder in June 2020.

implies both an embodied approach to learning and a recognition that perspectives are necessarily partial, influenced by upbringing, culture, and education. Although there is a clear ecological purpose to the list-making involved in my moth-recording practice, Shepherd's sentiment in the epigraph at the top of this section (about her relationship with the Cairngorm plateau) resonates strongly. The living encounters she describes give the activity of environmental fieldwork meaning for me.

Venerated ecologist E. O. Wilson states that to know a thing you have to name it (2016). The placing of organisms into evolutionary family trees is at the foundation of biology. Taxonomy's vital role in identifying unique life forms and their requirements is closely linked to the success of conservation efforts (Langellier 2024), and data-collection provides a framework for my activities. Yet I find it difficult to remember names and families, Latin or vernacular, until I have come to know the creatures by their habits and movements, through repeated encounters.¹²⁶ Partly this relates to an urge to unpick historical organising principles in art, craft and science, and explore the creative potential of "not fitting in the taxon" (Haraway 1992, 299). In rethinking such taxonomies, Barbara Creed (2017) suggests that having a home might be one hierarchy created by the ecological crisis. The propensity of the Anthropocene to render many more homeless, across species, requires a "stray ethics" founded in empathy, to counteract "marginalisation, abandonment... and change" (2017, 172).

In *The Living Mountain*, Shepherd demonstrates a simple but effective method to decentre a human within a landscape: bend over and look through your legs to see the world upside down. "Details are no longer part of a grouping in a picture of which I am the focal point... Nothing has reference to me, the looker. This is how the earth must see itself" (2011, 11). Shepherd expresses her deep connection with the landscape of the Cairngorms, getting to know a place in all aspects. Ecological data is experiential; a very personal narrative is a contribution in itself, adding to the diversity of known ways of relating to nature within culture.

¹²⁶ This is in contrast to the 'twitchers' who flocked from all over the UK to see the rare Alchymist we displayed at Woodberry Wetlands in September 2016, and tick it off their 'life list'. (See [The Stoke Newington Alchymist](#) in the online research journal).

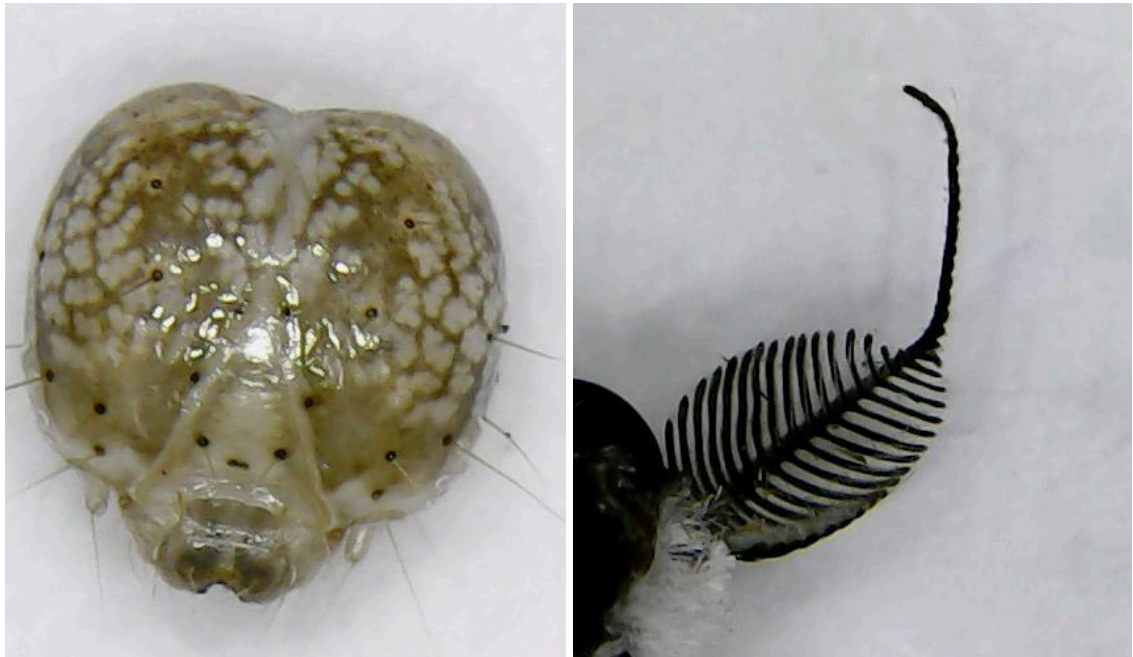


Fig. 5.5: Headcase, Angle Shades (*Phlogophora meticulosa*) caterpillar 2 August. Katherine Pogson 2020

Fig. 5.6: Antenna of the male Leopard moth (*Zeuzera pyrina*) 2 August. Katherine Pogson 2020

Multispecies ethnography applies post-anthropocentric and new materialist thinking to extend anthropology to include more-than-human entanglements (3.2). The method concentrates on subjectivity and overlooked interspecies encounters to bring “understudied organisms... into anthropological conversations” (Kirksey and Helmreich, 2010, 576). Tsing bases her fieldwork method for attuning to multispecies dynamics on three practices: direct observation of encounters that do not include humans, sensitivity to more-than-human timescales, and grounding research in a specific landscape (2020, 22). To expand the scope of what is considered valuable data in my own fieldwork, I build on these tools to include sensory observation, and responses to ethical dilemmas that provoke interventions of care.

Sensory ethnography is particularly suited to encounters not focused on language. Pink describes how sensory research distils knowledge through “embodied... negotiations” of intersubjective feeling and affect (2013, 35). In attending to more-than-human interactions, links to wider environmental forces – plants, weather and other creatures – become more visible, and essential to understanding

one's place within them. Noticing the local, the mundane and the microscopic confronts second-hand knowledge, developing curiosity and ecological literacy. Fieldwork has made me more aware of the impact of phenomena such as moonphase and barometric pressure on biological interactions (described in *A Moth Journey*, Appendix C). The research thus connects outward to other fields of knowledge such as meteorology, botany and geology, providing further material for creative consideration. The immersive practice of multispecies fieldwork fosters ecological awareness by sensitising the artist to the requirements for flourishing of the more-than-human. At the same time, it brings the human into sharp focus through intimate encounters with individual organisms. By engineering these encounters in the pursuit of knowledge the artist implicates themselves in a relationship, and awareness of this cannot be separated from the experience. Understanding the scale of human responsibility for acts of harm to the more-than-human contributes to an enhanced self-consciousness. As a site for creative enquiry therefore, multispecies autoethnography reframes nature study as an inherently relational enquiry into the ethics of interspecies encounters.

More than information- and material-gathering, fieldwork is a critical stimulus for creative practice. Sharp emphasises how fieldwork can spark “imagination through embodied encounters” (Sharp in Crone et al. 2022, 50). The sensory experience of ecological observation develops layers of memories alongside visual stimuli in an active meaning-making practice. A sense of the environment ‘speaking back to you’ can generate a feeling of belonging, especially in an urban setting where ‘nature’ and humans are sharply divided. Through rhythms of familiarity and change, the dialogue sets up a connection to other living things that can awaken surprising empathy. Imani Jacqueline Brown terms such sensitivity to the more-than-human grounded in the dynamics of a specific place “ecological witnessing” (Brown in Crone et al. 2022, 37) underlining its ethical dimension. My practice is situated within a community of the more-than-humans themselves, other citizen-scientists, ecologists who interpret the data, art researchers engaging with ecology, and curious audiences for our work.

Process

In this research I reflect on selected moth-trap encounters in the period between 2016-2022 (there was a year's research break in 2019). I set traps at irregular intervals dependent on the weather and my other commitments, leaving gaps between sessions so as not to recapture or retain the same individuals for too long.¹²⁷ The following journal extract and images describe the recording process, and the images give a sense of its initial urgency, together with the seasonal and place-based variety of the species gathered.

Journal entry, 6th June 2018

Moth-trapping: The first part is fraught. The second part is time-consuming.

Up at dawn. Before 4.30am in summer. Need to be on the roof before the sun rises and the moths (and birds) become too active. Examine the trap. Try and photograph all the moths quickly, count numbers, bottle interesting ones for a longer look. Protect the trap, carry chosen specimens on egg boxes down the ladder to the safety of the terrace. Take more controlled photos of selected moths. Place some in the fridge temporarily to become torpid and more easy to identify, or to come back to later.

Identify the moths using Manley and Lewington books, UK moths online,¹²⁸ my own growing knowledge, and Twitter when stuck. Image recognition apps have begun to make this a much quicker task, but they bypass the bodily process of memorising features and phenology through repeated acts of engagement. I learn by flicking through the books and back at my own photos; recurrent exposure to photographs arranged in systematic order gives me a deeper understanding of the relationship between families, genus and forms, including look-alikes. Identification involves absorbing seasonal signals, migration patterns, the location of likely foodplants, and the possibility of rarity. It is not only a visual act.

After identifying species in handwritten notes, I enter the information on a spreadsheet: Taxon / Site / Recorder / Date / Quantity / Method / Sex / Stage / Status and send the log to the county recorder at the end of the year.

¹²⁷ I continue to collect moth data between March and October as an ongoing practice.

¹²⁸ <https://www.ukmoths.org.uk>



Fig. 5.7: *View from the rooftop moth-trap, N19.* 10 May, 07:00:45. Katherine Pogson 2020

After the hurry of checking and photographing the trap contents, the identification is much slower. In the early days this might take up to two hours, as I learned the species, discovered how many similar looking micro-moths there are, and experienced seasonal waves of change in the makeup of the catch.

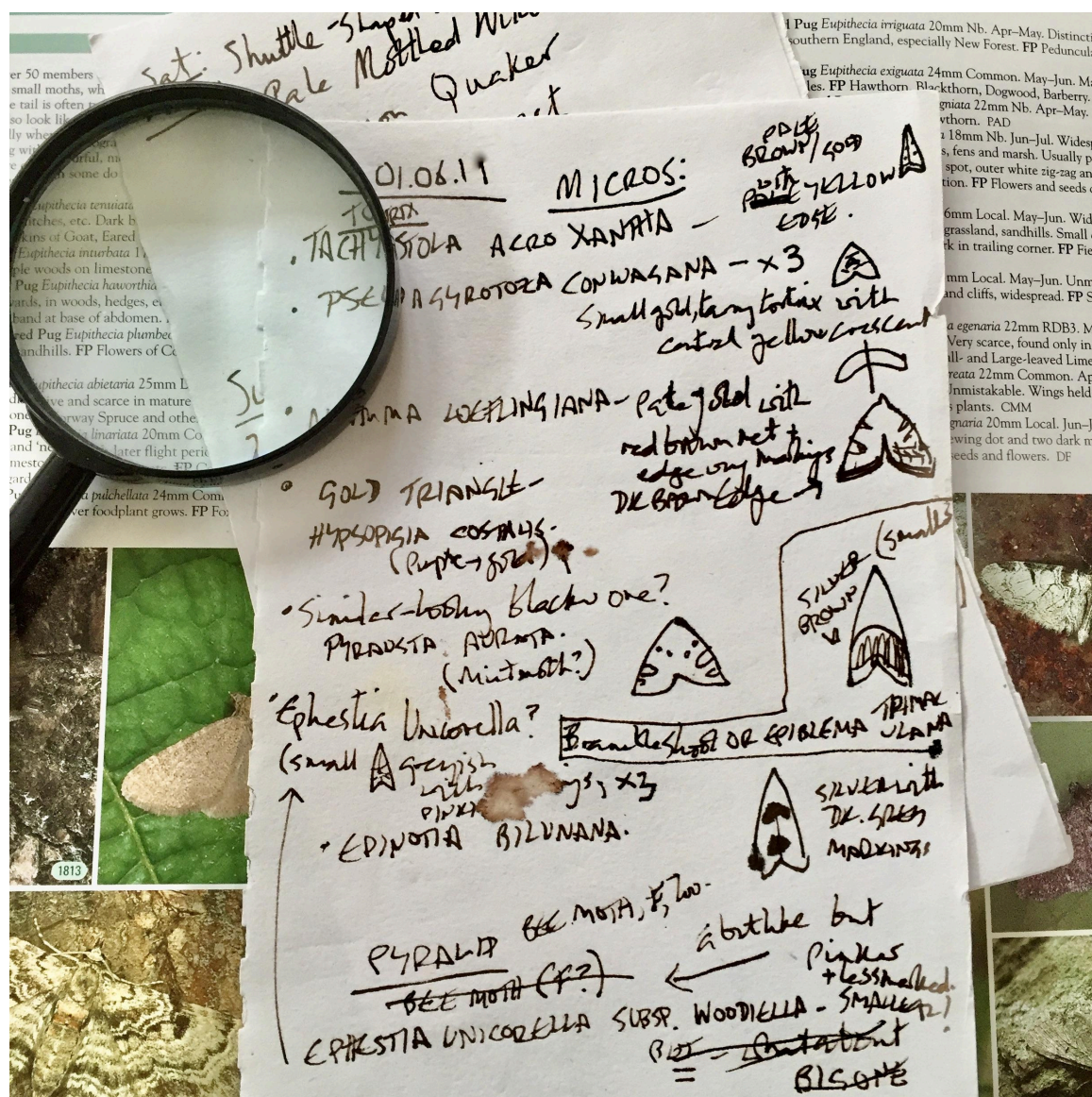


Fig. 5.8: Moth identification notes 1 June. Katherine Pogson 2019

Notes and sketches aid identification, but more importantly, the repetition of names and descriptions helps the process of embedding memories of distinctive features and Latin names. In transferring this to the rigid structure of the spreadsheet, I became aware of how much information, valuable to me, was not recorded there. Identification is not just visual and seasonal; you begin to notice patterns in humidity, barometric pressure and wind direction that significantly affect the contents of your trap. Such sensory information connects the records to their location, embedding you as a recorder more deeply in your ecology.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
			Tetrad	GridRef	VC	Recorder	Determiner	Date	Quantity	Method	Sex	Stage	Status	Comments			
1	N19 Roof 2019																
2	Taxon	English name	Site	GridRef	VC	Recorder	Determiner	Date	Quantity	Method	Sex	Stage	Status	Comments			
3		Shuttle-shaped Dart	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	25/05/2019	1	Light trapping	Female	Adult	Not recorded				
4		Pale Mottled Willow	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	25/05/2019	1	Light trapping		Adult	Not recorded				
5		Rustic	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	25/05/2019	1	Light trapping		Adult	Not recorded				
6		Garden Carpet	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	25/05/2019	1	Light trapping		Adult	Not recorded				
7		Iron Prominent	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	25/05/2019	1	Light trapping		Adult	Not recorded				
8		Brown house moth	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	25/05/2019	1	Light trapping		Adult	Not recorded				
9		Willow Beauty	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	26/05/2019	2	Light trapping		Adult	Not recorded				
10		Plain Pug	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	26/05/2019	2	Light trapping		Adult	Not recorded				
11		Euzophera pinguis	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	26/05/2019	1	Light trapping		Adult	Not recorded				
12		Pale Mottled Willow	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	26/05/2019	4	Light trapping		Adult	Not recorded				
13		Garden Carpet	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	26/05/2019	1	Light trapping		Adult	Not recorded				
14		Shuttle-shaped Dart	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	26/05/2019	1	Light trapping	Female	Adult	Not recorded				
15		White Ermine	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	26/05/2019	2	Light trapping		Adult	Not recorded				
16		Bee moth	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	26/05/2019	1	Light trapping		Adult	Not recorded				
17		Ephestia Unicolorella	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	26/05/2019	1	Light trapping		Adult	Not recorded				
18		Rustic	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	26/05/2019	1	Light trapping		Adult	Not recorded				
19		Peppered moth	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	31/05/2019	1	Light trapping		Adult	Not recorded				
20		Pale Mottled Willow	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	31/05/2019	2	Light trapping		Adult	Not recorded				
21		Heart & Dart	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	31/05/2019	1	Light trapping		Adult	Not recorded				
22		Rustic	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	31/05/2019	1	Light trapping		Adult	Not recorded				
23		After a very warm night															
24		Cinnabar	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	01/06/2019	1	Light trapping		Adult	Not recorded				
25		Ermine	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	01/06/2019	1	Light trapping		Adult	Not recorded				
26		Willow Beauty	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	01/06/2019	1	Light trapping	Male	Adult	Not recorded				
27		Silver Y	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	01/06/2019	1	Light trapping		Adult	Not recorded				
28		Garden Carpet	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	01/06/2019	1	Light trapping		Adult	Not recorded				
29		Broken-barred Carpet	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	01/06/2019	1	Light trapping		Adult	Not recorded				
30		Heart & Dart	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	01/06/2019	2	Light trapping		Adult	Not recorded				
31		Dark Marbled Carpet	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	01/06/2019	1	Light trapping		Adult	Not recorded				
32		Large Yellow Underwing	N19 roof	TQ30166 87240	21	K.Pogson	K.Pogson	01/06/2019	1	Light trapping	Male	Adult	Not recorded				

Fig. 5.9: *Moth recording spreadsheet*. Katherine Pogson 2019 [Link to spreadsheet](#)

The Atlas of Britain & Ireland's Larger Moths (Randle et al. 2019) was a milestone publication for lepidopterists. More than 25 million records from Britain and Ireland were collated, to show their distribution and trends over time. The Atlas shows changes in territory and abundance since 1970, presenting a complex picture of colonisation by new species, and decline of others. Changes in phenology: the timing of lifecycles, such as emergence, flight periods and number of broods a year are clearly shown in accessible charts, allowing the citizen-science researcher to gain a broader overview of how moth species indicate and reflect environmental change on a national scale.

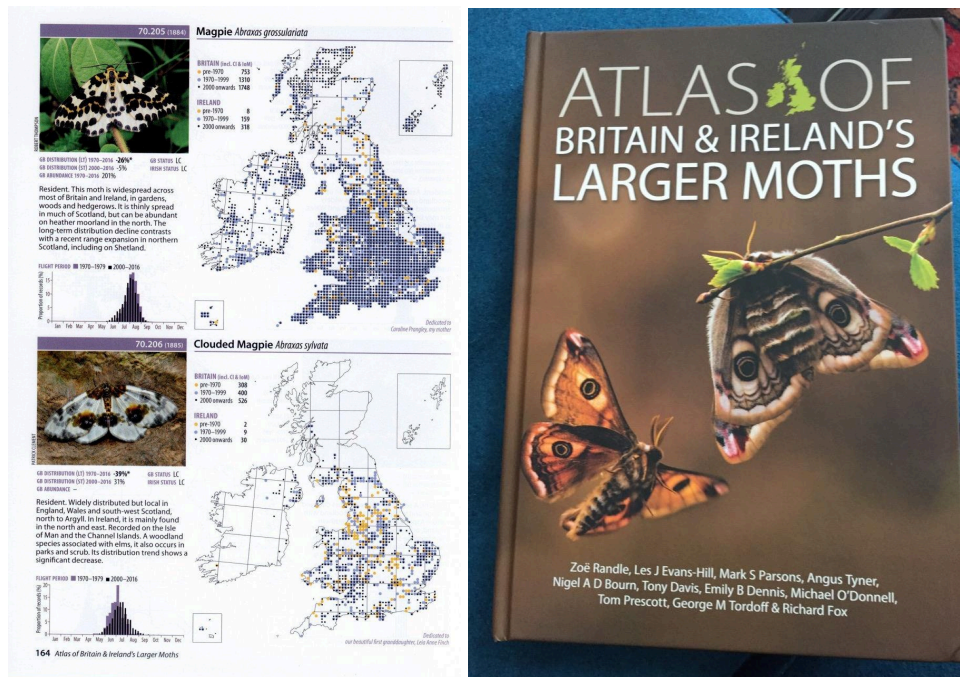


Fig. 5.10: Detail and cover from *Atlas of Britain & Ireland's Larger Moths*. Randle et al. 2019

The light trap apparatus is very different at night than in the day. The light encourages frenzied activity, and the lively characteristics of these nocturnal organisms are much more visible. Here the recorder enters the lifeworld of the moth more fully. Certain species may be attracted but somehow never enter the trap, so the morning record is always incomplete.

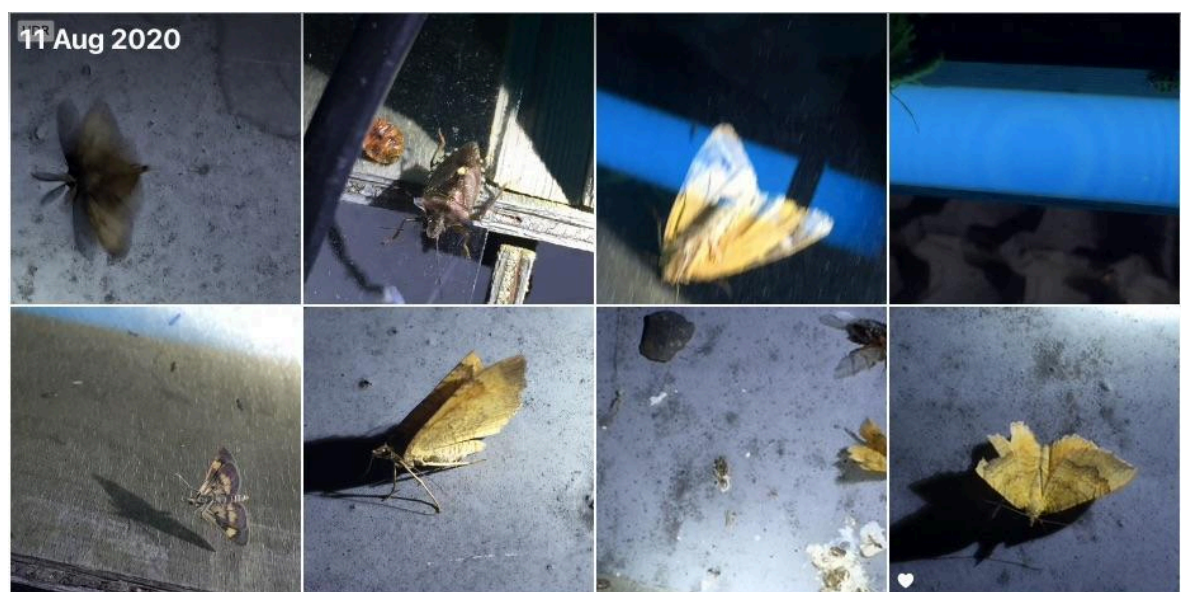


Fig. 5.11: Screenshot, frenetic night time trap activity, 11 August. Katherine Pogson 2020

Species in the photograph above from top row left: Gypsy moth *Lymantria dispar*, male, unidentified shield bug and harlequin ladybird, Jersey Tiger *Euplagia quadripunctaria*. Bottom row: Purple and Gold *Pyrausta purpuralis*, Yellow Shell *Camptogramma bilineata*.

Micro-moth species in the morning photograph from top left: *Epinotia bilunana* (camouflaged to match its birch host plant), *Tachystola acroxantha* (an Australian import spreading Northwards). Bottom row: The Sycamore *Acronicta aceris*, a light grey macro moth with the most astonishing orange and yellow furry caterpillar, Codling moth *Cydia pomonella* a fruit-loving Tortrix moth. Many micro moths do not yet have common names.



Fig. 5 12: Early morning trap 2 June, 05.17.08. Katherine Pogson 2019

By comparison, in the morning many moths are in torpor, and more easily handled. Not all though; some are flighty and almost impossible to photograph before they escape. Because of the hurried nature of the morning identification, I take a lot of accidental photographs.

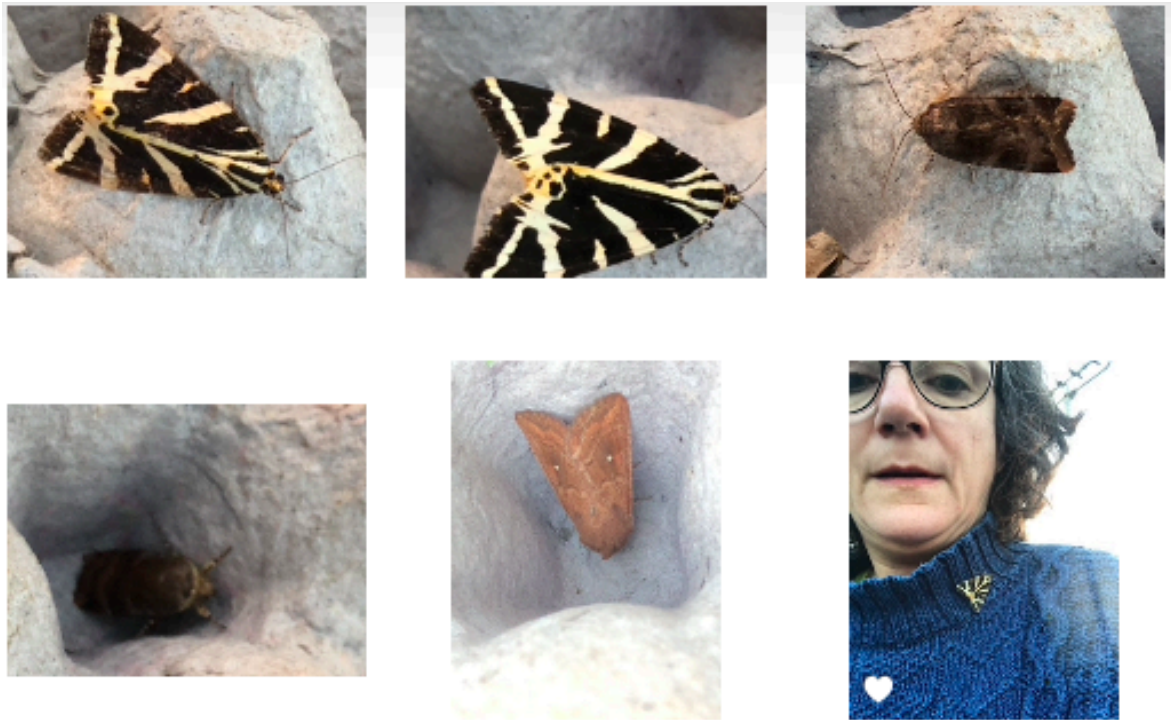


Fig. 5.13: *Moth trap selfie* 23 August. Katherine Pogson 2023



Fig. 5.14: *Accidental moth trap photo* 15 August. Katherine Pogson 2017



Fig. 5.15: *Light Emerald (Campaea margaritata)* screenshot 27 August, 08:16:23. Katherine Pogson 2017



Fig. 5.16: *Toadflax Brocade (Calophasia lunula)* screenshot 7 August. Katherine Pogson 2017



Fig. 5.17: Rustic/Vine's Rustic (*Hoplodrina ambigua*) from underneath. 27 August. Katherine Pogson 2017



Fig. 5.18: Maiden's Blush (*Cyclophora punctaria*) 25 May. Katherine Pogson 2017

The photograph below comes from an early recording session I carried out in Eryri, Wales (Snowdonia). This strikingly patterned moth is a moorland species that feeds on bracken, and one that I am unlikely to ever encounter in my London trap.



Fig. 5.19: Map-winged swift (*Korscheltellus fusconebulosa*), Dyffryn Mymbyr. Katherine Pogson 2016

The following images give a flavour of the recording sessions at Woodberry Wetlands, London Wildlife Trust. Only a short bike-ride from my house, the species identified here are different again, showing an intimate connection between specific habitat and species, reflecting connections between the reeds, water and ancient oaks nearby.



Fig. 5.20: *Woodberry Wetlands, 6 September, 06.44.17*. Katherine Pogson 2021

Woodberry Wetlands was originally wooded downland, the wetlands are artificially created. The New River, constructed in the early seventeenth century to bring fresh drinking water to London, forms its Western border. The work was extended in the 1830s to make the East and West reservoirs, and the area became home to one of the earliest postwar social housing estates, Woodberry Down.

Regenerated social housing now rings the East Reservoir with high-density tower blocks and landscaping, while the nature reserve that surrounds the water opened to the public in 2016.



Fig. 5.21: Woodberry Wetlands moth-ID session, 26 July. Katherine Pogson 2016

Moth name (Common or Latin) When possible, include Bradley & Fletcher Lepidopetra code	Family name
CREAM-BORDERED GREEN PEA	
ACLERIS FORSKAELIANA III III III	
DWARF CREAM WAVE	
RIBAND WAVE III III III III	
EUROPEAN CORN BEARER II	
BUTTERMINE III	
SNOUT III	
SM. MASPIE II	
WILLOW BEAUTY III	
EUOMA MERCURIA III	
CHEPSIS CONSILIANA III III	
DUN-BAR II	
CRASSA BARBIS UNITA II	
OBSCURE WAINSCOT	
PALL MOTTLED WILLOW II	
HIRSOPHIA SHODCINALIS III	
HEART + DART III III III	
Notes: Please indicate any books or keys used for identification	
Ot = other lit. ref., please cite here:	

Fig. 5.22: Woodberry Wetlands moth-recording list in progress, 20 June. Katherine Pogson 2017

Obscure Wainscot (*Leucania obsoleta*) on the list above feeds only on the stems of common reed and is a sure sign of a nearby wetland habitat.



Fig. 5.23: *Obscure Wainscot (Leucania obsoleta)* Woodberry Wetlands, 26 July. Katherine Pogson 2016



Fig. 5.24: *Moth-trapping at Woodberry Wetlands at night, 16 September.* Katherine Pogson 2016

In section 5.2 I introduced the idea of rearing moths from caterpillar eggs found in the light traps. The compulsion to nurture these life forms that I felt responsible for led to a deeper strand of my fieldwork, intimately engaged with monitoring each life stage of a range of different species, and learning when to provide sustenance, when to resist interfering, and how to recognise the signs of pupation and emergence. Some lifecycles took only a few weeks, some took exactly nine months, the same as a human being: Pale Mottled Willow, (*Caradrina clavipalpis*), Dark Marbled Carpet (*Dysstroma citrata*). These are described more fully in the [Caterpillar care diaries](#).



Fig. 5.25: Jersey Tiger (*Euplagia quadripunctaria*) eggs, 21 August. Katherine Pogson 2020

Jersey Tiger moths are not native to the UK and, used to milder climates, do not enter diapause during the winter months. This meant I had to find nettles to feed them throughout the winter months. The life cycle of this particular brood took an entire year, from August to August.



Fig. 5.26: Jersey Tiger (*Euplagia quadripunctaria*) caterpillars, 17 April. Katherine Pogson 2021



Fig. 5.27: Jersey Tiger (*Euplagia quadripunctaria*) chrysalis 6 July, 10.06.13. Katherine Pogson 2021

5.2.2 Autoethnography

The very excitement of my senses commits to memory the suite of colours and scents, the angle of the light, the scratching briars, the solid placement of this tree, and the rise of the hill before me.

– Anna Tsing, "Unruly edges: mushrooms as companion species: for Donna Haraway." *Environmental Humanities* 1, no. 1, 2012, p.142.

In September 2018 I was asked to organise a work-in-progress show. We had to move out of the light-filled painter's studio by the railway at the end of the month. Having relished the space to expand, I found nothing was working. Tentative textile manipulations hung limply from hooks on the high walls. Needing to communicate the essence of my research to invited colleagues, I edited together the phone videos I had taken over the summer, nurturing three Comma butterfly caterpillars from egg to emergence. Carefully timing speech and silence to the moving images, I wrote a script, *Nourishment*. I wanted this to be live, not recorded.

People talked, drank and fingered the textiles. My lepidopterist's paraphernalia of eye loupes, magnifying glasses and tweezers, together with specimen jars holding expired moths and empty chrysalises were arranged on the work surfaces. I waited for the summer light to drain from the skylight, turning the far wall blue. Removing the tea towel covering the projector, I put on my head torch, and began to read my script.

Prior to completing the script for *Nourishment*, I contributed a chapter to the publication *Design and Nature: A Partnership* (Fletcher et al. 2019) entitled 'Towards something more liveable'... *A Moth Journey* (Appendix C). The diary form proved an economical way to bring different strands of the multispecies experience together; I was encouraged that it was considered suitable for academic publication. The piece describes working through material practice to articulate a more explicit decentred ecological standpoint. Yet, still thinking of myself as a maker, I considered the text separate from my creative output at the time.

The spoken text was a turning point in my practice development. For the first time, I recognised the need to include myself in the subject matter in an explicit way, to communicate effectively. The performative element of head-torch and spoken word was necessary to highlight my self-conscious position. Acknowledging my

presence within an enquiry about decentring the human subject felt uncomfortable at first, as the research was not supposed to be about me. Makers process experience through materials, but representing the forms of moths did not express my intention: subject and means of expression were in conflict. The work-in-progress event dismantled any premature focus on producing finished material objects. The diary form became a bridge between the fieldwork and expanding creative practice. At this point, I recognised the potential of the autoethnographic process as a relevant research method.

Autoethnography analyses individual lived experience and memory in relation to a prevailing culture, to explore particular circumstances from a transformed perspective (Barrett and Bolt 2014). The method homes in on realisations and turning points, and is therefore a retrospective and selective act. The highly personal becomes a lens through which aspects of culture can be communicated more widely (Ellis et al. 2011). By deliberately addressing the subjective space between observation and expression to acknowledge emotions, autoethnography intends to “disrupt the binary of science and art” in a way that is central to my positioning of the citizen–science–artist (Ellis et al. 2011, 39). Although the method has been criticised as falling between two stools (insufficiently rigorous as ethnography and not literary enough as autobiography (Atkinson and Delamont, 2006), it is specifically designed to expand boundaries between different knowledge practices. Pleading for the inclusion of more sensuous and evocative means of expression within academic writing, Pelias defined *autobiography* as using the self “as a springboard, as a witness”, whereas *autoethnography* seeks resonance between self and culture (2004, 11). Autoethnography therefore encompasses aspects of autobiography, extending them to reflect on cultural attitudes from a particular standpoint.

Reflective writing can make an otherwise solitary knowledge journey visible (Pink 2013). Acts of witnessing are crucial in a time of ecological disruption. *Multispecies* autoethnography shifts the emphasis from the body interacting with culture onto the relationship between humans and nature itself (Gillespie 2022). Alcoff underlined the critical role of autoethnography in combating colonial attitudes of privilege within traditional anthropology, where researchers study cultures from outside (1991), and this is relevant to my recognition of the need to acknowledge my

position within the research; I had only been looking at one half of the relationship. I focus on human cultural understandings of insects to highlight their otherwise disregarded generative agency. While reflective autoethnography involves explicit recognition of one's own role in the documentation and development of practice, the multispecies focus avoids recentring the self within the research by drawing attention to overlooked aspects of other lifeworlds. Placing the researcher alongside the more-than-human balances projected empathy with a decentred perspective to inform narratives aimed at cultural change.



Fig. 5.28: Empty cocoon of the Emperor moth (*Saturnia pavonia*) Skye. Katherine Pogson 2017

[T]he hero does not look well in this bag.

– Ursula Le Guin, *The Carrier Bag Theory of Fiction*. Ignota Books, 2019, p.35.

Finding a purse-sized empty cocoon of the Emperor moth *Saturnia pavonia* on Skye (figure 5.28) brought to mind a text by science-fiction writer Ursula Le Guin. In *The Carrier Bag Theory of Fiction*, Le Guin unpicks human origin stories to enact a profound reversal of the Hero archetype, building on Elizabeth Fisher's feminist revision of evolution (1979) suggesting the container or "recipient", rather than the weapon, as the first "cultural device" (Le Guin 2019 [1988], 29). As a former designer of vessels and bags, Le Guin's focus on the container as the primary human cultural tool resonated strongly with me.

Storytelling from this feminist point of view challenges dominant narratives that exclude the lived experience of many, prioritising alternatives that offer plural ways of seeing. Le Guin encourages critical awareness of the culturally specific metaphors that construct meaning and frame worldviews. Through inverting the narrative of hero and hunter, she draws attention to the mundane activities that support communal life, such as gathering food. The idea of inversion mirrors the eleventh principle of permaculture,¹²⁹ where margins and edges, the dynamic borders between zones, produce more diverse and abundant crops (Holmgren 2011). Decentring the human world view to promote ecological literacy requires a reversal of ideas, such as of pest and nuisance, resonant with Tsing's statement that "cereals domesticate humans" (2012, 145). I apply this inversion to more-than-human sustenance in the video *Nourishment*.

My impasse in material practice at the work-in-progress show stemmed partly from a resistance to the use of natural forms as a stand-in for conceptual rigour (described in 4.3 Craft), prompting a more narrative approach than was previously part of my practice. Freeman points out how "[a]rtful approaches to narrative enquiry can contribute to ethical practice by increasing sympathy and compassion." (Freeman in Candlin 2007, 142). Ethical dilemmas became the central

¹²⁹ Land-based ecological activism that maintains and restores through regenerative agriculture.

focus for my multispecies autoethnography. My work seeks to make seemingly marginal experiences relevant and moving to those who may not have considered this way of relating to insects before. The cultural experience I address through this method is the invisibility and marginal status of ecological literacy within urban experience.¹³⁰ Foregrounding moths draws attention to the dismissive attitudes towards insects within my society, providing a lens through which to examine nature relationships more broadly.



Fig. 5.29: *The caterpillar that turned out to be a Pale Mottled Willow (Caradrina clavipalpis), eating rose leaves, 2 November. Caterpillar care diary 1. Katherine Pogson 2016*

Caterpillar care diaries

Journal entry, 30 June 2018

Since September, the small perspex tube containing the citrus yellow eggs of the Dark Marbled Carpets laid on the last day of my second trip to Skye sat neglected on my terrace. In the Winter, the wind caught and rolled the bottle around a little, so that once or

¹³⁰ Former Green Party leader Caroline Lucas's initiative to institute a Natural History GCSE is relevant in this context (Harris 2024).

twice I brought it back to sit in a sheltered post near the glass door. This was more out of a sense of tidiness than any belief that it contained viable propositions for life. But I did not clean out the bottle. Knowing how hardy the tiny specks must be to survive these months in exposed northerly latitudes. This gestation period matched that of the writing process for the Design and Nature piece. On 26 March, the eggs began to hatch, just as the writing process was complete. I fed them until the end of May, they pupated, and took flight on 15 and 22 June, a gestation period of exactly 9 months and 2 weeks. Six days later, I witnessed the Comma eggs being laid.

In May 2016, with the incident of the Emperor moth eggs laid on my foot in Skye, I began a series of [Caterpillar care diaries](#), charting my attempts to care for moth eggs that resulted from light-trapping activities. These diaries developed a new strand of reflective journaling, deepening my process of thinking through decentred human relationships with nature. They became the focus of my creative writing (*Species Stories*, Appendix E), surfacing themes of companionship and care that involved learning to nurture and reflections on damage.

Hidden contexts

Journal entry 9 December, 2021

These not-quite-deaths: I am learning them. The stillness, and then the convulsions. So many times she [my mother] has come back from the brink. Three times now in the last few years we have been taken out into the hospital corridor to have 'the conversation'. In the caterpillars, such pauses indicate a metabolic gear-change followed by the shedding of skin. Metamorphosis. But sometimes the gears misalign. I have seen a creature get stuck halfway between fat-bodied worm and crunchy chrysalis; another's head explode in outcrops of florid mould; others eaten alive, bodily, from below. Predation and failure to thrive is common in the wild, but I wonder how much of this is my fault. Have I provided the conditions for survival? I am learning these things feelingly. Not from reading about lifecycles, but by watching closely, interfering, and having my presumptions proved wrong over and over again. In this way, I am learning not to act.

At a UAL research seminar on Compositional Methodologies (Rachel Marsden, UAL, 26 February 2024) one of the prompts asked “*What are the hidden (unconscious) narratives in your research/researcher-self? Who are the footnotes or citations (contexts) to your story?*” It was only then that I recognised a parallel background context relevant to interpreting my fieldwork reflections should be acknowledged.

Caring for my mother over the almost-ten year span of this research impacted both my ability to progress the work, and the preoccupations within it. This context pervades my reflections about caring for caterpillars, but I had not consciously addressed its impact on my research before. The seminar unlocked a turning point, echoing the one at the work-in-progress show in 2018, adding another layer to my autoethnographic analysis. My diaries evidence the emergent, cyclical, reflective process of research, revealing a series of connections through non-linear time. The transfers of thought between the two different practices of care are developed in the creative writing practice, the *Species Stories*, video scripts and as thematic threads in the material practice in Chapter Six (see Appendix B for a list and links).

Fragmentation

Journal entry 4 April 2021

As parts of the brain of the Parkinson's sufferer lose connectivity, the life force continues trying to make sense across the gaps. This is analogous to wild populations of moths separated by fragmented habitats, travelling further and longer to find sustenance or company, becoming dispersed, exhausted, but also in the effort, adapting to new foodplants, conditions, territories.

Witnessing my mother persist in trying to make sense of an increasingly fractured experience through diminished synapses, presented a parallel with the thinning biodiversity I studied.¹³¹ The image of disparate populations working harder to connect, feed themselves and mate across distances in a progressively degraded and polluted landscape (Tsing's “simplified ecologies” 2016, 4) influenced my short text *What will evolve?* (Appendix D) and the textile pieces *Devoured/Pelt for a Creature That Does Not Yet Exist*, together with their accompanying texts (6.3.1). Her

¹³¹ For example, trend data for the Hebrew Character moth *Orthosia gothica* presents “an ongoing long term increase in distribution (+10%), but a concurrent decrease in abundance (– 31%)”. (Randle et al. 2019, 391).

unpredictable loss of functional control as memory, speech and senses alter, giving rise to auditory and visual hallucinations, informed my attempts to imagine more-than-human modes of experience through alternative sensory apparatuses (*Towards Light*).

Control

Journal entry 9 June 2022

As if humiliation is a thing that can be quantified.

Caring for a person that is dying often involves pretending things are better than they are, sometimes more for your own benefit than that of the patient. And, in between the crises, the sudden lurches downward in ability, it is often boring.

An uneven power balance exists where, though you readily, eagerly even, do the intimate bodily acts (preferable to the long hours of stasis, non sequiturs, repetitions and babbling of dementia) you also feel impatience. It is difficult to keep those little signals that shut down communication out of your voice. And then of course there are times when you exert your power physically over the fragile body, the bag of bones without muscles; moving it, not moving it, stopping it from moving – for your own convenience, but saying it is for their protection. Protection from falling again, yes, but also from realising the fullness of their loss of capacity; as if humiliation is a thing that can be quantified.

Caring for the terminally ill raises questions of power, convenience and control beyond the personal. The unpalatable details of disintegration are often hidden from public view, and social expectations create an added burden for those suffering. Environmental degradation presents a parallel: loss of bio-abundance and diversity generates more-than-human suffering at a population level that is mostly absent from public discourse. My experience of nursing sensitised me to the accidental violence I witnessed, and sometimes caused, in my moth encounters. It seems to be what matters. The disregarded hidden labour done by insects in ecological assemblages mirrors the work of volunteer and poorly paid carers in society; each struggles to maintain essential life services to the point of exhaustion and collapse. Ecological care requires a shift in perspective that links capacities to flourish or to suffer to their causes, rather than seeing them as an “inherent state”

(Chatzidakis et al. 2020, 88). As poverty is not innate, but caused by deprivations, ecological ongoingness requires space, sustenance and time to repair.

The control involved in acts of care balances personal convenience with altruism. Autonomy and dignity are often removed from the person being cared for by choices made by the carer. The carer becomes acutely aware of manipulating this in subtle ways because of their relative power. This can be to avoid the less palatable, or more complicated aspects of care.

My Comma caterpillar diaries, leading to the first video *Nourishment*, reveal how my pleasure in watching the lifecycle of these three butterflies allowed me to prioritise removing them from their habitat, at risk to their safety, under the convenient guise of protecting them from greater harm. Such interventions confronted me directly with the impact of my actions, activating a personal sense of responsibility. The idea that if I left them, they would die as the host plant shrivelled up and no others were nearby was compelling. But really, it was my pleasure in watching them grow that led me to take them on holiday.

Shifting baseline

Journal entry, 14 March 2023

Caring for the person with Parkinson's is partly about nostalgia for the person they once were. People say it is about 'maintaining dignity', but really that is progressively stripped away; maintaining an illusion of dignity perhaps, a compensatory urge.

Each time you visit, you witness a lessening of capacity, and a kind of double surprise, the shrinking of expectations. Surprise at the infinite capacity for loss, of the fine-grained qualities of existence. And the inbuilt human thing that seems to interpret each 'new normal' as a stable, continuous state, that you quickly get used to. How the life force persists while faculties are chipped away. Not steadily, not evenly, but relentlessly all the same. It makes me think of Haraway's dog, Cayenne, aging on a different timescale to her human companion (When Species Meet).

The shifting baseline concept is one of temporal dissonance, continuity and its opposite, where early experiences of, for example, insect abundance, are used as the standard to measure change from. Related to my theme of *letting go*, it raises ethical dilemmas about how environmental changes are recognised. This seems crucial to the debates about conservation of wild species discussed in 2.5 and is a concern worked on in the *White Plume Miser's Purse* (figure 6.34) and *Devoured* textile pieces (section 6.3.1), responding to extinctions and whether to fight or accept inertia.

Journal entry, 16 May 2018

The generative fluctuations of insects are well-known, numbers swell and fall in response to rhythms of rainfall, wind speed and bud-time, this last itself informed by temperature and light. This is not clockwork, not a simplified machine but a subtle sequence with many parts. And that makes it easier to forget the overall trajectory, the shifting baseline, and the speeding up, the higher frequency of the oscillations. It is unpredictable in the short term, inevitable in the long. A neuron may fire unexpectedly, a refuge may be found. But it is temporary. In this seesaw sickness of constant recalibration, we are always playing catch up.

In ecology, shifting baseline syndrome tends to minimise perceptions of environmental deterioration, making some sceptical of calls to action (Papworth et al. 2008). Humans expect stability and are often unprepared for change. Travelling to and from a declining person at intervals, the deterioration of a body becomes more visible so that the visitor is always playing catch up. This is the theme behind the text *What will Evolve?* in Appendix D, and is reflected on through the use of a patchwork technique of unpicking and reworking garments, to highlight the constantly morphing nature of our understanding of natural abundance in and *Devoured/Pelt for a Creature That Does Not Yet Exist* (figure 6.25).

We assume the ongoingness of insects in the background because of their perceived abundance – even as our collective activities decimate their numbers, deliberately, or inadvertently. In the same way, we assume stable health, until it goes wrong. Care tends to focus on immediate needs at the expense of macro-problems. Medications to ease individual suffering can layer up into a toxic

cocktail with unintended consequences. I find a strong resonance here with environmental micro-actions such as tidying and spraying verges, and controlling vegetation in public spaces.

Caring for more-than-humans requires training to understand their basic needs and how not to damage them in the process. Caring for biodiversity might mean, in part, taking on more of this familial, tedious, unpaid work, as many conservation volunteers do. But it will need more than that, it will need a public infrastructure which recognises and supports the labour required. Thinking about care through personal encounters highlights the ways that ethical awakening can be activated, so that a connection between human actions and consequences can be opened up. Themes of fragmentation and suffering, the control involved in care, the alternative sensory apparatus caused by disintegrating neural connections and the shifting baseline syndrome of gradual decline emerged from caring for my mother, and found resonance with my experiences of learning to care for the environment through and with moths, leaving me to reflect on difference, nourishment, damage and care as key concepts.

Process

Completing the moth identification and filing the spreadsheet fulfilled the citizen-science part of the fieldwork. The artist picked up at this point by asking ‘what is missing from the data?’ Having recognised the framework of autoethnography as a conscious method, I developed a process based on evocative autoethnography (Bochner and Ellis 2016) to record and reflect on the fieldwork experience over the long period of part-time research.

The generation points for my autoethnographic process centred on significant moth trap encounters, a number of which led to extended relationships, captured in the *Caterpillar care diaries*. My reflective prompts focused on care and ecological literacy. The diaries record what I learned from the moths’ reactions to sensory environmental cues; how to care for them by providing the correct sustenance and conditions; and how not to interfere at crucial life stages. I note my feelings of responsibility in having power over their lives, and complicity in acts of carelessness and damage. I digest emotional reactions to flourishings and failures

to thrive, and the ongoing joy of living with moths through time. The immediate ‘field journal’ notes were recorded as first-person narrative, descriptive writing and memos in both hand-written and online diaries on, or shortly after, the day of the event. These are supplemented by the photographs, notes and sketches from the moth-traps themselves.

Further reflective writing took place over the extended period of the research, often revisiting much earlier experiences. The busiest time of active fieldwork was in the years 2016–18 before my research break and the pandemic, and these experiences lay the groundwork for my ecological learning curve. I often made voice-notes while walking, chewing over a particular thought or feeling. These more reflective diaries absorbed elements of thought from my theoretical readings. Some autoethnographers use the third person for the reflection stage in order to eliminate bias but the subjective nature of my creative goal made this unhelpful. Instead, I relied on critical distance through repeated reflections on ethical themes over time, together with Haraway’s explanation of situated knowledge and partial connections to develop the reflective process. The final results of the multispecies ethnographic process are collected in the *Species Stories*, Appendix E.

The aim of the practice is to extend empathy, understanding and companionship to the more-than-human through narratives that show this in action. Reflection on lived experience through engaging story-telling makes the cultural characteristics of nature-relationships “familiar to insiders and outsiders” (Ellis et al. 2011, 276). Therefore the relational multispecies autoethnographic method contributed a narrative focus to the creative practice. As the research progressed, creative writing became more important as a practice in its own right, due to its narrative potential. My process departs from the classic model of social science autoethnography by presenting the analysis partly through the creative practice itself. Where the text of this thesis critically assesses the relevant concepts and findings of the research, their relational qualities are more fully expressed through the creative practice outputs as a totality, both narrative and object-based.

Evidence

Journal entry, 13 May 2024

I identify deeply with the Arctic Woolly Bear moth.¹³²

*Dubbed the “freeze-thaw caterpillar”, in its larval state *Gynaephora groenlandica* undergoes up to ten winters of total refrigeration, breaking down its mitochondria to withstand extreme subzero temperatures before re-assembling its internal apparatus in Spring. The Arctic summers are too short for the organism to consume enough nourishment to complete metamorphosis in one go.*

We are taught to interpret this story as one of hardship and endurance. There is anxiety attached to such long maturation – a fear that the final fullness will be short. Some moths have no mouth parts in the adult stage, no time to feed.

What use is this anthropomorphism?

Of the things we fear about ‘the insectivorous other’, this might be one: the long labour through those alien changes for such a short life? In this of course we mistake the end product for the whole of the ‘mattering’ life, as much more time is usually spent in those previous stages. Being in the egg you are ‘nothing’, the caterpillar is ‘just an eating machine’ (how many times have I read this on amateur friendly wildlife sites?) And the imago is all about sex. This reductive view pinpoints how we are measured by productivity, selectively ignoring most of the preparatory labour. And this brings me back to the idea of crypsis, of hiding. Sometimes it is necessary to live as one is not, in order to become the thing you might be.

As a social science method, autoethnography requires systematic analysis of experiences. Having acknowledged its relevance as a methodology, I adapted the process to suit a creative practice-based multispecies enquiry. Recognising the sensory information of the fieldwork as valid data was a breakthrough in developing a narrative approach (*A Moth Journey*). Autoethnographic analysis becomes a reflexive process, integrating theory and practice to inform a thematic approach to creative practice that communicates the understandings more widely.

¹³² [BBC One – Frozen Planet, Spring, Freeze-thaw caterpillars](#) 2 November 2011. 4 mins.

Learning about moths became learning to *care for* moths, and my diaries came to focus on realisations about care. As well as food plant requirements and their specific links to species (ecological literacy), learning focused on adjusting to more-than-human time spans through patience and self-restraint, consciously recording the amateur process of learning by doing (with its wrong guesses) and becoming highly aware of my capacity for damage (ethical responsibility). The ethical tensions between control and care became a central narrative in my documentation of personal experience, informed by tensions on the macro scale in biological conservation. Implicating myself in the research through the autoethnographic process provided a bridge between fieldwork and creative practice, leading to the development of creative writing outputs. The non-linear development of understandings typical of practice-as-research enabled fuller exploration of my research contexts, allowing unexpected directions to be identified, critical perspectives to be articulated, and the research narrative to be more clearly expressed.

Recognising the need to bring my own subject position more directly into the work as Haraway's 'situated knowledge' stresses, involved embracing autoethnography as an explicit method. Being forced to confront and articulate private feelings within the practice was uncomfortable at first. However, deprioritising the urge to complete work prematurely in favour of focussing on the learning process itself became a necessity. Moving through this juncture involved contemplating the limits of creative practice in the face of the ecological emergency, and reframing creativity as more direct action through conservation as a focus for the future, process of *letting go*.

The autoethnographic evidence collating moth trap events, images and journal reflections mapped to practice outputs is in my online [Research journal](https://www.katherinepogson.com/projects).¹³³ The *Species Stories* (Appendix E) are the result of the multispecies ethnographic process, and are discussed further in 6.1.3.

¹³³ <https://www.katherinepogson.com/projects>

5.2.3 Practice as research

Arguments about how to define visual arts creative practice as legitimate research have bedevilled arts education since at least a decade before the Rochester Report for the Committee for National Academic Awards in 1974 (Schwarzenbach and Hackett, 2015).¹³⁴ Research in the arts necessarily focuses on how to communicate “the transferability of the understandings” (Candy 2006, 2). However, recognition of these was for a long time steered towards technical or material innovation, rather than ontology.

Fifty years on, more inclusive interpretations of practice research have evolved to recognise knowledges that exist in forms other than speech and writing, and make them an explicit part of the discourse. Gray and Malins (2004) delineated the unpredictable, experiential and responsive process of making, drawing on Schön’s theory of reflective practice (1983). Candy defined practice-based research as where new knowledge is embedded in the creative work and cannot be understood in isolation from it (2006). Practice as research was first defined by Nelson in 2013, who placed practice “at the heart of the methodology of the project” and as the container of evidence (26). Anthropologist Adam Drazin has pointed out that practice as research can involve the combination of several disciplines, and practitioners may not be sufficiently skilled in all of them.¹³⁵ However, practice as research is now recognised as “unique in foregrounding intuitive, embodied, tacit, imaginative, effective, and sensory ways of knowing” (Dr. James Bulley, “Launch event for the findings of the Artist Citizens Jury 2022” Goldsmiths, University of London, July 19, 2023). Narratives for communicating such research elements do not necessarily follow “linear structures” (Price and Wakeford 2023, 51) and can be layered and iterative. Practice as research not only enables researchers to share the ways of knowing that emerge in practice (Bulley and Şahin 2021), but to “invent” their own “means of dissemination” (Dr. James Bulley, “Practice as Research” lecture at University of the Arts London, London, March 3, 2022). Therefore, an experimental approach to the final form of the output is integral to the arts research process.

¹³⁴ The first practice-based PhD in art and design was awarded to Andrew Stonyer in 1978. His contribution to knowledge focused on solar power techniques for kinetic sculpture (Schwarzenbach and Hackett, 2015, 51).

¹³⁵ TECHNE live lecture, London College of Fashion, UAL, 9 February 2017.

Creative arts methodology rationale

Davis and Turpin outline compelling reasons why art practice is “central to thinking with and feeling through the Anthropocene.” First, the experience of living with the reality of degraded environments is a sensory one. Second, our understanding has “frequently been framed through modes of the visual” making art the natural site for responsive practices “not confined by the regimes of scientific objectivity” (Davis and Turpin 2015, 3 – 4). Social scientist John Law points out how “a highly prescriptive version of the nature of the real” in his discipline dictates that “reality cannot be a mess.” The objective method does not respond well to complexity, creating a repressed “other” within its findings, an “absence” within the record (Law 2003, 3). His argument speaks to the roots of the ecological emergency in the separation of the sciences and arts discussed previously, where overly rational attitudes have indeed created a ‘mess’. T.J. Demos further underlines how the intersectional nature of ecology itself makes it highly relevant to current art practice, as it has to take into account “social, political, economic, and material determinations” (Demos 2016, 24).

The experimental nature of arts practice provides a safe space in which to both recalibrate to the experience of the present, and use the imagination to work through possibilities in a non-judgmental way. Making space for imagining alternative ecological futures requires an experiential “attentiveness to more-than-human worlds” (Crone et al 2022, 14). The practice of making involves three key elements: interpretative or dialectical thinking (identifying and solving problems), conceptual, empiricist thought (reflecting on knowledge or information), and critical practice, which includes collaboration or cross-disciplinary elements. Sullivan (2010) stresses how the methodology must emerge from within visual arts practice, rather than be bolted on from another discipline. While these methods may appear eclectic and non-linear, there is a central theoretical framework, which continually adapts in response to experience. My research is characterised by an active praxis where manipulation of materials, including sounds and words and experiences, are conceived as thinking practices in themselves, filtered through a central framework of post anthropocentric care and multispecies companionship. The following chapter discusses the process and contributions of the creative practice in detail.

Chapter Six – Practice



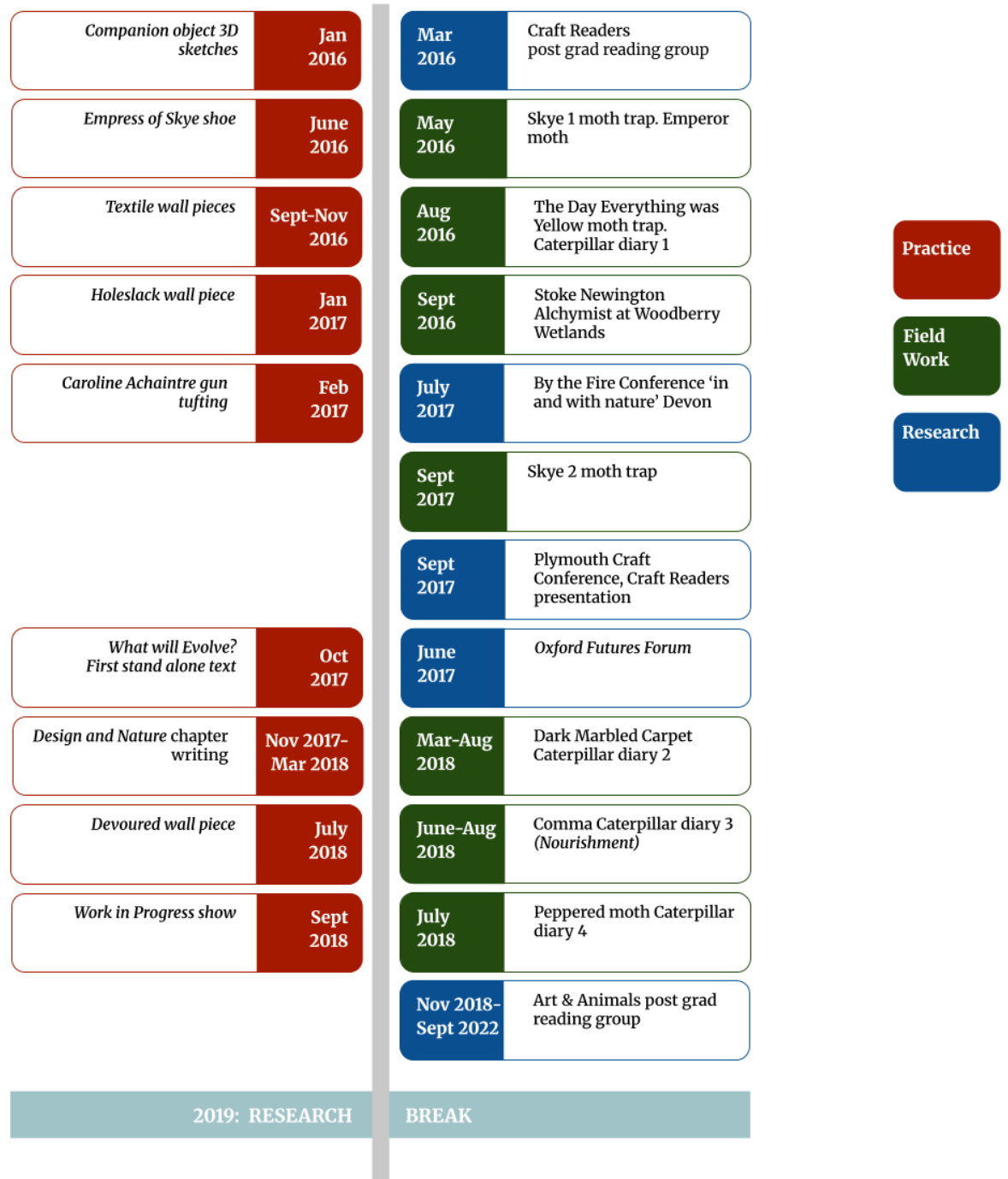
Fig. 6.1: Lime-speck pug (*Eupithecia centaureata*) 12 May, 08:42:23. Katherine Pogson 2017

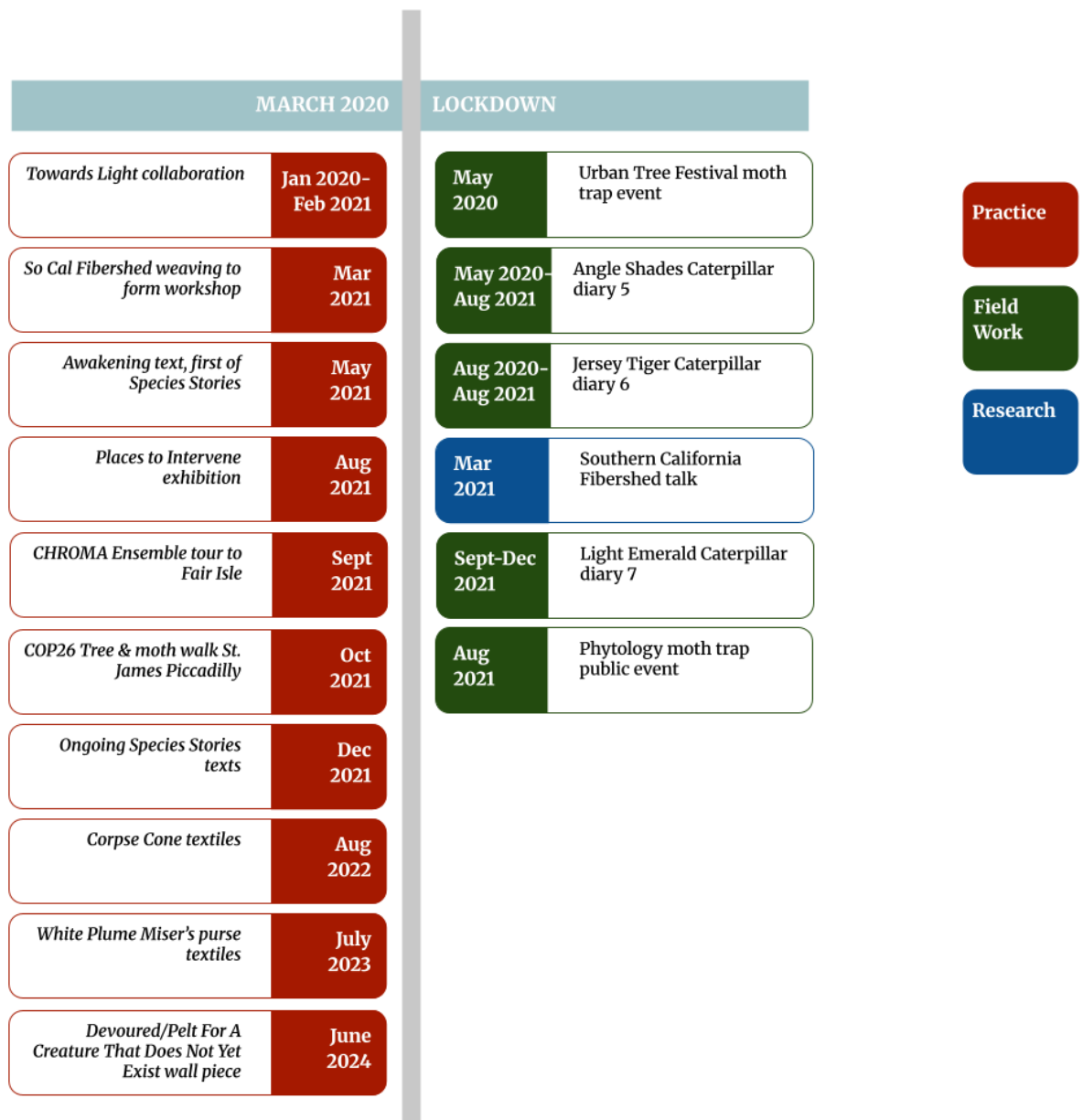
...there is no such map.

– Tim Ingold, *The Perception of the Environment: Essays on livelihood, dwelling and skill*, Routledge, 2000, p.219.

This chapter evaluates how multispecies fieldwork has transformed my craft-based practice, deepening its potential to promote a decentred multispecies sensibility. In reflecting on the limitations of object making to communicate the experience of ecological fieldwork, I developed an expanded practice that includes creative writing, video, collaborations and community workshops. The chapter first charts how the diary form provided a route towards experimentation with unfamiliar media and collaborative processes through three text-based projects, before returning to analyse how the themes and data collected through citizen-science activity influenced a new approach to textile-based studio practice.

Practice timeline





The timeline above shows how my expanded practice developed, linking the different elements to the fieldwork events that gave rise to them, and including key academic research activities and events for context. As the practice engaged with the fieldwork, the early focus on craft and objects became less central, in favour of the development of creative writing.

6.1 The diary form

6.1.1 ‘Towards something more liveable’... *A Moth Journey*

published in *Design and Nature: A Partnership*. Edited by Kate Fletcher, Louise St. Pierre and Mathilda Tham. Earthscan Routledge 2019, 26–31. (Hereafter referred to as *A Moth Journey*). The text is in Appendix C.

In October 2017 I responded to a call for contributions to an edited book exploring design’s engagement with the natural world. The brief requested proposals “based on experience of participating in the world through life, responsibility and context” and invited contributors to be “explicit about their own position” (*Design and Nature* call for contributions, 25 September 2017). Consciously embracing an autoethnographic approach for the first time became an important step forward in my research practice. *A Moth Journey* traces my steps to find a relevant expressive language to respond to what I understood through my involvement in citizen-science fieldwork. The title is taken from a lecture given by Donna Haraway at the AURA conference (2014, one minute in). My text uses the diary form to outline how the process of moth recording informed the development of a series of reflective practices – of noticing, inversion and community engagement – that began to deconstruct my creative urge and redirect what I sought to materialise through the act of making.

The process begins with opening myself to sensory cues from the environment. This heightens awareness of different timescales and lifeworlds running concurrently (the rough sleepers observed in the park). Close observation of more-than-humans has the effect of undoing preconceptions, drawing attention to their independent energies as opposed to presumed fragility, prompting wider reflection on the impacts of human practices on more-than-human flourishing. Involvement in citizen-science activity connected me to a community of practice and learning through the charity Butterfly Conservation, and as a volunteer at London Wildlife Trust. In studio practice, this learning suggested two ways forward: a more thoughtful engagement with materiality, and a necessary process of undoing unhelpful ways of thinking in ecological terms. Decentring the human

may sideline the act of making art as a central focus, widening the means of expression used to communicate ecological understandings..

As an approach to creative practice, these steps slow the urge to respond to experience through material engagement, allowing a deeper appreciation of how the sensory nature of interspecies encounters can transform received understandings. Ethical impulses in turn divert the focus of the creative urge towards aspects of relationship rather than designs based on observations of form, opening up narrative possibilities and prompting an expansion of media and methods. Dilemmas about complicity in harm to the more-than-human became a thematic focus for me. However, reviewing my creative process also exposed the limitations of didactic work (discussed in the practitioner review Chapter Four), where concentrating on delivering facts does not provoke an effective emotional response or call to action, but can alienate audiences instead.

Learnings

The project prompted me to articulate my research journey and offered writing as a communicative medium in its own right. Through reflecting on the diversion of energy into fieldwork, I began to sketch out a methodology to interrogate my questions about the role of craft-making in an ecological crisis. Creative writing allows different ‘voices’ to be explored. For example, the second person “you” removes distance and involves an audience or reader in the immediacy of an event, whereas the first person “I” gives the impression of the “direct witness” of the researcher or narrator (Ellis et al. 2011, 12). *A Moth Journey* makes use of both registers, shown in the extract in the Prologue.

The process of writing allowed me to express the ideas developing within my research in an economical way. Autoethnography’s focus on “remembered moments... that force(d) a person to ...analyse lived experience” (Ellis et al. 2011, 6) offered an expressive route through a creative impasse for a work-in-progress event (discussed in 5.2.3). Realising that my research need not only be presented in academic language or polished artworks opened up routes to an expanded practice where object-making is a by-product. This added legitimacy to a further exploration of the diary genre as a reflective medium in its own right. The structure presented a way to show the passage of time, look at the story from

different places (the roof, the studio, the nature reserve, the urban street) and pose questions for future development. Defining what local means in a metropolis, and how both human and more-than-human migrants might experience urban life, generated material for future projects.

Contributors to the edited book were placed together in support groups of four, enabling constructive feedback on each other's work. My group worked individually on relationships with weather, cities, moths and plants. The structure honed our intent to communicate different aspects of our collective goal to displace humans from the centre of cultural constructions of nature as exemplified in design practice. While not a collaborative process in terms of authorship, the discussions presented collaboration as a potential method for developing future creative outputs, discussed hereafter. The text records the way that ecological fieldwork 'interfered' with my practice, akin to Haraway's metaphor of diffraction (1992). Experiences and understandings ripple through one other, altering the original trajectory of a singular impulse.¹³⁶

6.1.2 Nourishment



Fig. 6.2: *Nourishment*. Video still. Katherine Pogson 2018

[*Nourishment*](#) 6.55 minutes, is a video with voiceover, first performed live at a work-in-progress event on 12 September 2018, and subsequently in a workshop at

¹³⁶ See section 6.2, *Towards Light* and the short text *Interference*.

the Global Fashion Conference, London, 31 October 2018 (see Appendix F. 1).

Nourishment began as a private video diary (described in 5.2.2), documenting a month spent nurturing three caterpillars of the Comma butterfly through the entire lifecycle from egg to adult, during a heatwave. Fearing for their survival on the parched and stunted Wych-Elm on my terrace where they were born, I took the larvae with me on a holiday to Cornwall. On my return, I tied the chrysalises back on to their native tree, where they emerged successfully. The process took just over six weeks.

The narrative confronts themes of responsibility, selfishness, and control in relation to more-than-human creatures, and relates these to motivations for making creative work. The theme poses questions about appropriate sustenance, in terms of scarcity of meaning. The imagery, sometimes deliberately out-of-focus (a caterpillar swinging wildly on a thread in the breeze at 1:30 minutes) and partly in slow motion, intends to suggest a separate more-than-human experience that exists outside human questions. A section at 4:22 minutes shows a rare moment of direct contact, when a wild Grayling butterfly collects minerals from my sweaty finger with its proboscis. Recording the videos on my phone, I had in mind nothing more than a personal record of visual material to develop practice from. My first experience of video editing, the process allowed me to extend the diary form with a visual element. Developing the script involved timing text and speech to match the filmed sequences, inserting 21 seconds of silence to concentrate the visual impact at a significant moment, as in a musical score.

Learnings

My audience at the work-in-progress was made up of friends, mostly from a fine art background, and fellow PhD students. Feedback on *Nourishment* pointed out that I was asking large questions in the script, perhaps too many for the scope of a research project. A useful conversation ensued about which of these could be answered within my enquiry, and which were larger questions that an artwork might address. Reflecting on the text afterwards, I identified the following questions: “Who or what am I making for?” This question expresses the decentring urge that began the research process, while “If you accept this as nourishment, who will you become?” relates to the PhD itself and fears about what the process of

undoing my professional identity might involve. Finally “How does a study of Lepidoptera inform a creative practice rooted in fashion and textiles?” was the focus for the event, and yet I was stuck in the material practice.

Interestingly, people were most focused on getting me to explain why I found the subject of moths fascinating in the first place. A recurrent theme throughout the research has been people’s puzzlement at the relevance of the topic. This shows that my mission is important and that I needed to do more to articulate it. In the Anthropocene context “What or who am I making for?” was intended more as personal reflection than a research question to be answered publicly, but communicated the conflict I felt at this juncture, which was the beginning of a personal decentring process. The audience interpreted this as ‘What is the role of making in the Anthropocene?’ and I agreed that this was too large a construction to approach within the research. The debate showed me that I needed to further articulate my precise research focus; and that the video contained the seeds of a potential artwork in its own right. To develop these realisations, I sought to collaborate with people who had the skills for film- and video-making.

Although I have since added a recorded voiceover, for the original presentations I performed the text live wearing a lepidopterist’s head torch as narrator. Putting on a character gave me confidence to situate myself explicitly within the work for the first time. Stepping into the narrative shifted the focus onto my relationship with the caterpillars. Expanding creative writing to include a performative element allowed me to express an embodied vulnerability. The confessional elements of the script made me feel emotionally exposed, while the deliberately low-fi video format tested this new direction and subject matter with an audience in an informal setting. Art theorist Graeme Sullivan states that “visual arts can be best located as a form of individual, social and critical inquiry” (2010, 50). Beginning with an individual, niche experience is a way to expand social and cultural enquiry into areas deemed marginal or trivial.



Figs. 6.3 and 6.4: *Nourishment*. Video stills. Katherine Pogson 2018

Showing the video in a workshop at the Global Fashion Conference at London College of Fashion, October 2018, provided an opportunity to explore links between the subject matter and sustainable fashion, and ways of applying my theories to the educational arena in which I found myself. The conference had four thematic strands: Power, Nature, Culture and Society. In the workshop, I played the video and gave a five-minute presentation laying out key concepts for responding to the Anthropocene challenge: shifting attention from the “methodological to ontological” (Maggs and Robinson 2016), “profoundly, madly, letting go” (Meadows 1999). I focused discussion on speculative ways in which the letting go concept could be applied to participants’ engagement with fashion, using the following prompts: wayfinding, storytelling, inversion and location.¹³⁷ The participants were sustainable fashion academics and professionals, and wanted to discuss practical applications of the theories I was exploring within the industry. I explained that the concept of appropriate nourishment could be a way to discuss the damaging practices of fashion, emphasising how the anthropocentric view of ‘moths eat your clothes’ contrasts with the reality of starvation in the wild – the ecological violence. Discussion was limited to fifteen minutes, but my key understandings from the process were that, while story-telling and locally-based practices are embraced by sustainable fashion (and have developed since this workshop), an

¹³⁷ A copy of the workshop proposal is found in the Appendix F. 1.

ontological focus and post-anthropocentric concepts are difficult to embed within such a profit-oriented, and materials-focused industry.

Making *Nourishment* was a crucial juncture on my way to developing an expanded practice. I was not fully conscious of building on the narrative structure of the *Design and Nature* text at the time, yet it brought visual elements back into play, and forced me to reveal my implication in the subject matter through the self-conscious element of performance. My next project took this further, through a collaborative process that included exhibition and community engagement.

6.1.3 Species Stories



Fig. 6.38: Expired Jersey Tiger (*Euplagia quadripunctaria*) 2 August. Katherine Pogson 2020

Species Stories (Appendix E) collects ten very short texts together as a culmination of the multispecies autoethnographic process. The writing illuminates a series of more-than-human encounters over the period of my research through interconnected themes. The strands reveal how ecological literacy emerges from experiences of care and control, confronting selective violence and hypocrisy and attunement to specific places. Beyond moths alone, a total of seventy species are included as the interlinked narrative unrolls. The text is an aspect I plan to develop as a printed risograph, in collaboration with graphic designers DesignPrintBind.

6.2 Expanded practice – Towards Light

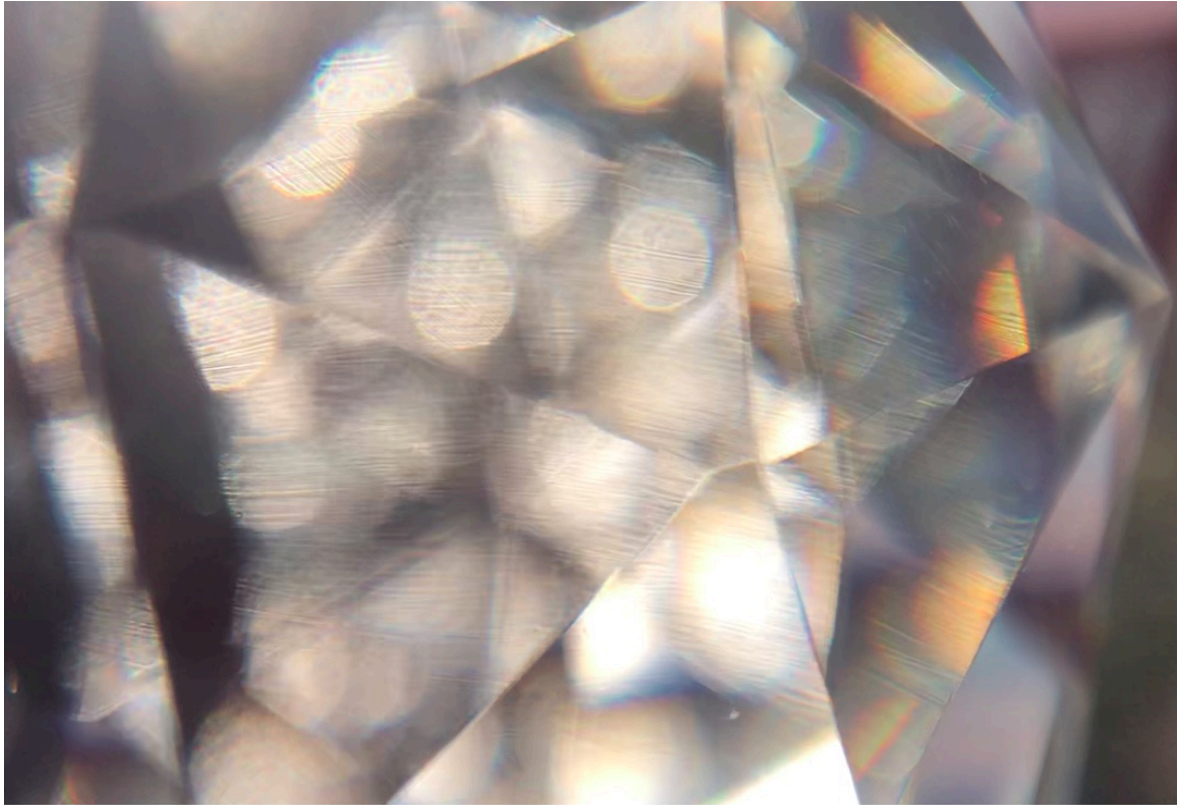


Fig. 6.5 *Towards Light*. Video still. Claire Shovelton and Katherine Pogson 2020

[Towards Light](#) is a ten-minute video made with Claire Shovelton between December 2019 and March 2020.¹³⁸ Three aspects of *Towards Light* are analysed here. The first reflects on knowledge realised through the process of collaboration, expanding the diary form described previously. The second responds to an exhibition at the Lumen Crypt Gallery, Bethnal Green. *Places to Intervene in a System* was an exhibition organised by the *Art and the More-than-human* postgraduate reading group at UAL. The third covers a tour with CHROMA contemporary chamber music ensemble to Fair Isle in September 2021, where *Towards Light* formed the basis for a musical concert, school and community workshops. I evaluate how the tour developed the project themes in a different context, and examine the community engagement aspects of the practice, before outlining how the insights gained have informed future creative development.

Because of the Covid-19 pandemic and ensuing lockdowns, *Towards Light* had a long gestation period. It grew slowly, like an overwintering caterpillar, snatching sustenance when it could between periods of enforced torpor. Final preparations for installing the exhibition were underway in March 2020 when lockdown hit. *Places to Intervene in a System* was rescheduled for October 2020, postponed again with the second lockdown, and finally took place in August 2021. Discussions with CHROMA began in December 2019 and we worked on funding applications January–May 2020. The Fair Isle tour was scheduled for August 2020 but rescheduled for September 2021.

6.2.1 Collaboration

Journal, October 2019

So – light, and responsiveness to light, as a theme.

Moths respond to light. But I am not interested in the candle-flame image. This is about displacing or inverting the human, to see the story of ‘the other’. How to enter their moon-responsive, air-tidal, pheromone world? How to join that world, without interference, without damage, and take your human goggles off, experience the night through the olfactory, branched antennae of the horned and horny male moth?

¹³⁸ The script can be found here: [Towards light – the script](#).

Collaboration is a method of robust communication with creatives from other disciplines. *Towards Light* was developed through an extended conversation with videographer Claire Shovelton, centred on my multispecies research. The narrative highlights experiential aspects of ecological fieldwork not captured by citizen-science methods of recording data. My text voices the perplexed efforts of a citizen-scientist to make sense of their encounters with moths. In doing so, I draw attention to the perceptual gap between species contrasting modes of life, due to sensory differences (pheromones and light-sensitivity, “the dark-adapted eye”), and explore both the uses and folly of anthropomorphism as a tool for empathy. Claire responded with a sensory film, tacitly suggesting the unknowability of the insect ‘other’. The abstract visuals suggest the moths navigating a sensory world of pheromones, air currents and nocturnal attraction to light, in search of fertility and love. The piece reveals itself in the tension between the two parallel viewpoints.

In the piece, I apply the concept of critical anthropomorphism as a conceptual tool in order to explore empathy and its limits (see 5.1.1). The aim was to articulate a decentred point of view towards interspecies encounters, and test audience receptivity to the theme and form of expression. Empathetic projection of human viewpoints onto the more-than-human has been a part, through indigenous rituals for example, of cultural ways to negotiate human/nature relationships for millennia, but has been sidelined by scientific ideas of progress. One context for the piece is the lack of ecological interaction that characterises urban living. In the human-dominated environment, engagement with the natural world can be longed for. Encounters with the wild can become romanticised, or feared, or construed as human-centred therapy. This mixture of longing and curiosity drives the narration of the piece, which ends on an intimate encounter between an exhausted migrating moth and an injured footballer, a rare moment of sympathetic connection. The piece acknowledges the contradictory nature of anthropomorphic projection to the scientific mind, in the frustrated inability of the lepidopterist to fully understand the subjects of their research. The encounters provoke ethical dilemmas, for the meetings are not reciprocal. The moth’s world is fraught with the impacts of human activity – light pollution, habitat fragmentation and dwindling populations.

Process

Claire is the producer at CHROMA contemporary music ensemble, and our first idea was for a spoken word piece to link musical sections in a live concert, accompanied by a projection. To begin the process of collaboration, I shared a dossier of images, references, colour stories and scientific papers.¹³⁹ Claire absorbed my information, responded with her own research, and we began a fruitful exchange of material. Claire also suggested the title, a translation of the scientific term ‘phototaxis’: the instinctive movement of some organisms towards sources of light. Claire filmed in Wapping, where her studio balcony opens directly over the River Thames. The light bouncing in from the river’s surface changes hourly, and became a key element in making the film, as she worked in camera with natural light only, using a process of diffraction to make abstract images. Light is the medium that facilitates these interspecies meetings, despite their contrasting modes of perception. The shifting imagery sets up an interference pattern emphasising the indirect connections between different lifeworlds.

Using my field notes, I outlined a seasonal structure corresponding to the life cycle of moths, centring on three movements: nourishment (early growth); moonlight (attraction and procreation); and flight (migration, freedom of movement). Each sequence centred on a specific encounter that challenged my feelings of being implicated in the phenomena I wished to observe. Claire pointed out that my diary notes worked as a ready-made script:

Extract from recorded conversation, 13 December 2019

C: Could it become something a bit slam poetry, a little spoken word? It does not need to force a narrative, in a way, embrace the ‘butterfly nature’ of your thought process, because part of what you are trying to describe is the random nature of the connections, one of the things about being in nature. If it is fragmented, you can create a narrative concept...

KP: So my words interlace between the music pieces, which give space to breathe and the music allows the idea to settle and percolate gently...

¹³⁹ <https://www.katherinepogson.com/journal/towards-light>

That what I thought were preparatory notes could become the work itself, rather than striving for a more resolved ‘libretto’, was a breakthrough moment. This reiterated an important insight from making *Nourishment*, helping me to move through periods of stuckness. It was also Claire’s suggestion to record my voice in the film, as a linking device to the live performances we discussed. This extended my work in *Nourishment*, where text and voice featured for the first time. Here it became a deliberate development from the autoethnographic method into a device that presents the character of the amateur citizen scientist.

Learnings

The process of collaboration allowed me to articulate my thematic ideas more fully in written form and receive concrete responses to these. We realised the value of fragmentary narratives, allowing the work to flow, through the centrality of the autoethnographic approach. Together these created a rhythm that allowed the creative work to develop smoothly, despite periods of inactivity enforced by the pandemic. The script is laden with anthropomorphic suggestions, but the images rebut this, telling their own story. Being able to ‘let go’ of control over the visual realisation through an act of trust proved to me that my research narrative was being understood and enhanced by collaboration. This resonated with the theme of “strategically, profoundly, madly letting go” chosen from ‘Leverage Points’ (Meadows 1999, 19), the provocation for the exhibition, discussed below in 6.2.2.

Returning from a year’s break, I found that the reciprocal ideation process of collaboration renewed my joy and confidence in my research subject. Each conversation extended the thought process and moved things forward productively, validating my attention to the subject matter and helping me to articulate it further. The discipline of working through meetings and deadlines with another person extended to the fund-raising applications for Fair Isle and the administration and publicity for the exhibition that we worked on together.

Interference – A final reflection on *Towards Light*

A moth’s wing at night, its active phase, is iridescent. Daylight bounces across the wing in an inheritable pattern that the human eye interprets as pigmented. But the infra-red spectrum, visible to the more-than-human eye, shows something

completely different, revealing the limits of the human sensory apparatus.¹⁴⁰ The view of moth wings as fixed colour is encouraged by the habit of identifying species through photographs. Photographs are distancing, flattening devices taken in daylight, when nocturnal species would be hiding, at rest. The need to move beyond visual delight in these surfaces was one of my concerns.

A wing is a filmy membrane covered with individual leaf-like scales. The scales diffract light through ridged chitinous folds, sending interference waves into each other, causing complicated patterns of “structural colour” (Zeng et al. 2011). Diffraction bends or spreads waves of light, causing a change in direction. For Haraway, diffraction patterns are not about difference, but pinpoint “where the effects of difference appear” (Haraway 1992, 300). This distinction is important in understanding the relational aspects of phenomena, brought into being through the meeting of entities. Light meets scale, and scatters. Some waves cancel each other out, some increase in intensity.

Feminist New Materialists Barad (2007) and Van Der Tuin (2014) adopt Haraway’s metaphor of diffraction as an alternative to reflection, suggesting the withdrawal of the self from observation. Haraway also separates diffraction from refraction, where an image may be displaced, but nevertheless reproduced without alteration (1992, 300). Diffraction attends to the origin of impulses, keeping ever-evolving intra-actions in mind. The subversive potential of this device generates possibilities of deviation from a straight trajectory, as an alternative to objectifying representation. Extending this feminist challenge to the more-than-human sphere draws attention to the complex interplay within ecological assemblages, which are not neutral, automatic, or predetermined, but co-constitutive, dynamic and ongoing. Don’t just absorb and reflect: interfere.

Diffraction was a key method in making *Towards Light*. The images in the film were constructed by diffracting natural light through a crystal at different times of day. The resonance of the piece resides where the angled trajectories of the voiced character and their silent-seeming subject meet, across difference. By employing phototaxis, the propensity for certain organisms to move towards light, I divert or

¹⁴⁰ “[S]pecies-specific structural differences in how the insects’ wings reflect and scatter infrared light... could eventually help scientists identify moth species using lidar (light detection and ranging), a tool that emits and senses infrared light.” Scientific American Magazine 2017. Vol. 317 No. 3, p.14.

diffract them out of their natural path temporarily.¹⁴¹ Diffraction is a methodology and a metaphor, emphasising embodied ways of understanding how to live in the midst of ongoing multiplicity (van der Tuin 2014). Ways of being are not fixed or predetermined. Modes of difference are in constant dialogue. Evolution requires variety. The idea that ways of knowing influence ways of being provides hope for amelioration of the environmental crisis, and a role for creative arts practice, because cultural production frames, embeds, communicates and challenges behaviours and beliefs within society.

Moth wing scales also deflect sound, cloaking the moths from bats (Zhiyuan et al. 2018). So much for our fixation on the visual. Professor of Sensory Biology Mark Holderied tells us that moth wings are an “acoustic metamaterial” (Butterfly Conservation online lecture 16 September 2021) designed to absorb and deflect certain vibrations through deformations in the surface membrane. Moths are in an “evolutionary arms race” with bats. Silk moths, like our native Emperor *Saturnia pavonia*, are deaf. Ripples in the wing deflect the echo-locating clicks made by bats (Neil et al. 2020). Micro moths, such as the Orchard Ermine *Yponomeuta padella*, have evolved the ability to make clicks on the same frequency. These tiny slivers of dotted pearly white disguise themselves as bats with a single wing-flap.

Expanded practice pushes the practitioner beyond their existing expertise, relevant to the theme of letting go. Collaboration allows divisions of labour to concentrate on specific aspects, while maintaining a critical and responsive dialogue. Such an approach promotes the development of appropriate, resonant, hybrid techniques of communicating understandings gained through the fieldwork.

¹⁴¹ “[A] moth’s eye is coated with tiny, uniform bumps that gradually bend (or refract) incoming light. The light waves **interfere** with one another and cancel one another out, rendering the eyes dark.” Scientific American, 26 July, 2017, p.16.

6.2.2 Exhibition – *Places to Intervene in a System*

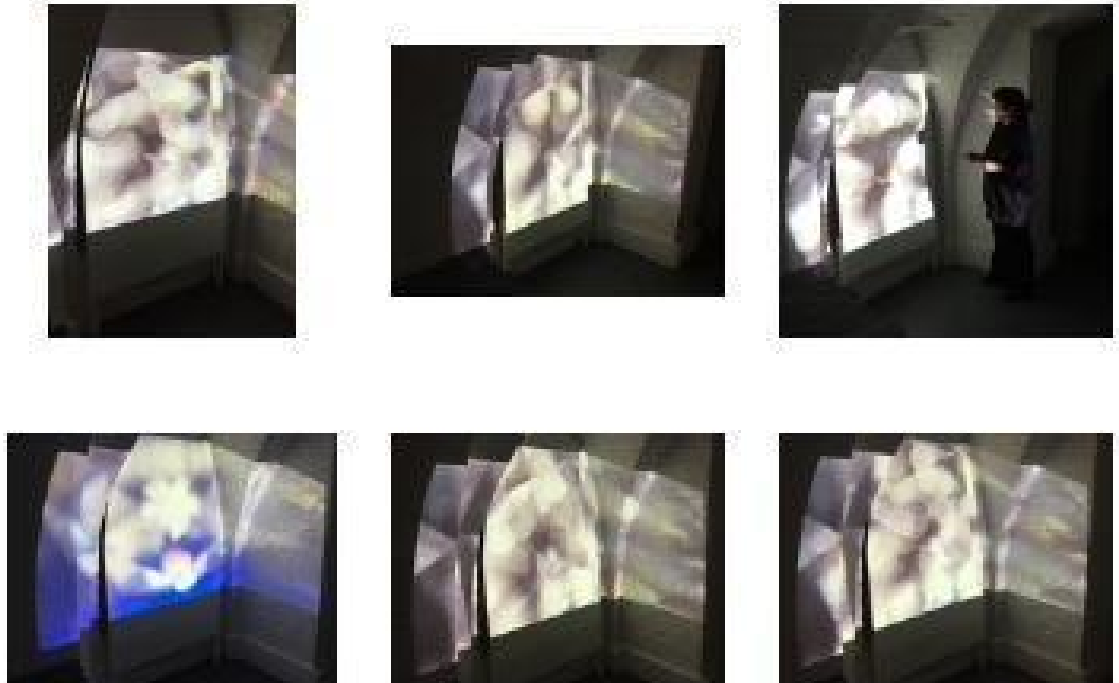


Fig. 6.6: *Installation test for Towards Light. Lumen Crypt gallery, Bethnal Green.* Katherine Pogson 2020

The exhibition *Places to Intervene in a System* took place between 19–22 August 2021 at the Lumen Crypt Gallery, St. John on Bethnal Green, London E2.¹⁴² The idea for an exhibition grew out of the lively *Art and the More-than-human* postgraduate reading group at UAL, set up in 2018 to share readings on ecological philosophy and related art practices. We decided early on to focus on conversation and process rather than static display, taking our work out into the community. Five artists presented work spanning video and sound projections, sculpture and prints. A range of activities with the local community and open air spaces were organised, including the Museum Gardens next to the church and the Bethnal Green nature reserve, known as Phytology.

¹⁴² An artist-run space for ecological work with a special interest in planetary light.

The exhibition extended beyond the confines of the crypt gallery into the church itself, which was important for social distancing guidelines, and meant that the crypt could become a dark space devoted to projections.

I suggested Meadows' seminal text *Leverage points* (1999) as a provocation. The article examines levels of effectiveness for intervening in complex systems. Each artist explored the exhibition as a site to interrogate how and where art practice might 'intervene in a system' of human relationships with nature, reacting to the different scales of impact outlined by Meadows. I was haunted by the final words of the article: "In the end it seems that power has less to do with pushing leverage points than it does with strategically, profoundly, madly letting go" (1999, 19). The text crystallises for me that perhaps the role of our generation is to dismantle some of the taxonomies and hierarchies that divide art and science, the enlightenment thought structures that pervade our relationship with nature. The challenge is to recognise ill-fitting paradigms for what they are. My starting point was to highlight the anthropocentric behavioural paradigms within which our relationships to nature take place, and disrupt them by privileging alternative narratives of the personal, the partial, the amateur.

Audience responses

While invigilating in the subterranean gallery for two days, I watched people engage with *Towards Light*, while experiencing it cyclically myself. I was interested in how an audience might respond to the deliberately slow pace of the work, especially the silent sunrise sequence. Claire sped this up in edits, but I convinced her that it was a central moment of the film that must happen in real time. A refracted sunrise glows through the different parts of the spectrum in a silence that lasts one minute and thirty seconds. I wondered if concentration would break at this point, but I did not see anyone get up or move away. Through experiencing the piece repeatedly, I began to notice the effect of the rhythm and pace of image and music on people. It was curious to stand behind a group of strangers and watch them become absorbed in the film, despite the challenging acoustics in the cramped tube of the gallery, especially when more than four people were present. This acute awareness of concentration and the duration of time became an important part of the experience of public viewing that I had thought might be

challenging, demonstrating how, for the audience experiencing an artwork, modes of logical cognition are expanded: “explanations are revealed, connections are made, and new forms of understanding emerge” (Sullivan, 2010, 95).

I was also curious to see if people would find the narrative boring. Overhearing people later at the private view discussing the idea of a moth’s sensory apparatus in contrast to humans showed that the concept of the piece – using ‘critical anthropomorphism’ to highlight the poignancy of the attempt by humans to understand another species, while also trying to express a different but parallel consciousness – had been communicated effectively. The gap between text and imagery encouraged people to vocalise their ideas of the moth’s eye view.

A third surprising aspect of the public screening was the response to my voice, “the sound of Mother Earth” according to one visitor. A performative element first appeared in my video diary piece *Nourishment*, arising from a need to find a new form to express the essence of my fieldwork at the work-in-progress exhibition. Accepting the use of a personal voice was a slow process of dissolving a binary between my material practice and my theoretical reading, leading me to recognise the autoethnographic method within my field research.

A fourth understanding that emerged through the exhibition came from a conversation with a colleague at an In Conversation event, organised to understand how the work was being received. Preoccupied with the possibility for bias present in anthropomorphism, I had been concerned that my narrative was too romantic, and not sufficiently critical. Discussions of anthropomorphism quickly encounter questions of romanticism. The critique is that the idealisation of aspects of ‘sublime’ nature places the human at the centre of an elemental experience, reinstating ideas of nature as at the service of humankind (Morton 2007, 5) and I expected some criticism for this approach. The passage where ‘the Male Willow Beauty launches into the sky, searching for molecules... of company’ is deliberately wistful, suggesting the pathos of the moth seeking others of its kind, distracted by light pollution (Boyes et al. 2021). My colleague reacted strongly when I asked if the projection of human feelings was too romantic, pointing out a “stark” focus on violence and death (in the sequence on the parasitised Jersey Tigers). This was another example of a subliminal influence surfacing through dialogue with others:

I had not realised the theme was so dominant. The insight came to fruition later when I realised the impact of the background context of caring for my mother (described in section 5.2.3) on the themes responded to in my practice.

The diary form

The *In Conversation* screening on 20 August 2021, attended by six invited colleagues and friends, allowed me to probe further into public response to the work. A participant recognised the influence of Patrick Keiller's films on *Towards Light*, and, mentioning Brecht, raised the question of genre. This was another moment of recognition. As my primary approach was thematic, I had not consciously considered the diary form as an intentional artistic device for this piece, beyond underpinning the rhythm of seasons and time. In retrospect, however, I had first used it in *Design and Nature* (Fletcher et al. 2019) and developed it in *Nourishment*. The importance of writing from a first-person stance as an expressive medium for the project was emphasised. I had previously considered this material to be private, requiring working up into something less personal for a finished output.

Originally, the video was intended for projection during a live concert, linked by passages of spoken word. The Fair Isle tour format had not yet been resolved at the time of the exhibition. The *In Conversation* discussions, which included the artistic director of CHROMA, helped to crystallise the format, presenting the film as a stand-alone event. The piece exists in the tension between the highly subjective and limited experience of the lepidopterist expressed through the voiced text, and the sensory and biological information gathered through the fieldwork; itself partial and full of conjecture, ignorance, and gaps in knowledge. In this sense, the exhibition was an extension of the practice-as-research process, looking for appropriate ways to express ideas, rather than testing a finished hypothesis.

A Scholar's desk/Lepidopterist's table

Journal entry, 13 August 2021.

A table, covered in a black cloth, supports books, magazines, papers and instruments. Repurposed plastic food containers hold insect specimens. There are specific tools – a digital microscope, a loupe; and more general ones – a child's ruler, a pair of metal

tweezers. A basic Ikea lamp illuminates the area of study. The paraphernalia reveals itself as a low-fi operation, a hobby, a self-education.



Fig. 6.7: A Scholar's desk/Lepidopterist's table. Installation. Places to Intervene in a System, Lumen Gallery. Katherine Pogson 2021

My desk installation *A Scholar's Desk/Lepidopterist's Table* (figure 6.7 above) at the exhibition drew on the work of Mark Dion and the cabinet of curiosities to introduce ideas about how nature is framed by science and the amateur. The table gently draws attention to the frame within which we have viewed nature historically, and places this in a contemporary context. I intended to suggest how the discipline of lepidoptery has moved on from pinning live specimens, but still involves encounters with death, on a vastly different scale. The title alludes to the tradition of scholar's objects in Chinese history, where nobles would retreat from court to practice calligraphy and contemplate nature. The installation contrasts the romance of contemplation of nature with Western scientific apparatus to place cultural ideas about nature under the lens. The installation uses my own kit. The mundane quality of the objects highlights the self-taught quality of my pursuit. These are real bodies, personal experiences; the murdered Jersey Tigers in *Towards*

Light are in the bottle on the desk.¹⁴³ The display includes *The Butterflies of the London Area* (Plant, 1987). The book made use of then-recent advances in computerisation to map data on London butterfly populations gathered over the preceding decades. The tetrad square diagrams show the link between forest cover, chalk, clay and built-up areas, and the correspondence with where species flourish, the working structure of ecosystems now further degraded. This is already an historical document, as a new *Atlas of Britain and Ireland's Larger Moths* (Randle et al. 2019) charts the rapid change in biodiversity, with significant decline in the abundance of many species, especially in urban areas, from the 1970s. The context is local, and recent.

Conversation with one visitor to the exhibition centred on this installation. The visitor picked up on the reference to nineteenth-century scientific cabinets of curiosity. I was delighted, because I thought the piece could be much more fully developed aesthetically, and may not be understood. We discussed how the way natural history has been framed in the past informs our interpretations today, caught up in problematic questions around hierarchy, professionalism and the impossibility of removing yourself from the equation when making sense of scientific observation. Their comments related mainly to Victorian dioramas and museum displays, and the need for decolonialising such interpretations of nature. While I recognise the significance of this iconography, I am more interested in the preceding centuries, when natural history itself evolved before separating into a scientific discipline removed from philosophy. The legacy of the amateur naturalist, from Gilbert White of Selbourne in 1789 onwards charts how the discovery and distribution of knowledge about native species has been advanced by enthusiastic non-specialists from the start, and continues with citizen scientists today. Digital opportunities for crowdsourcing data have made it easier for hobbyists to make genuine contributions to science, for instance in moth-hunting through the process of finding 'white holes' (places where species have not yet been recorded).

¹⁴³ The Jersey Tiger tells a story of expanding territory and range, another aspect of global heating. A recent arrival in London, they have colonised gradually from the Channel Islands since the 1930s. The move northwards of polyphagous or generalist species, where territory has expanded due to global heating, as well as the fragmentation and dwindling of specialist populations, is part of the complex picture of rapid population change over the last half century.

A number of valuable insights were gained through the exhibition. The first was to continue to develop first-person creative writing as a more conscious aspect of practice. This includes the acceptance of a performative element and the use of my own voice, which I may not have pursued if others had not encouraged me. The second insight is to work more deeply into the idea of the history of natural history as subject matter. Working in collaboration was very fruitful; my process benefits greatly from sharing my vision and workload with others, and has fostered a more open idea of what might constitute finished work. Challenges from the exhibition responses are to think more consciously about genre in future video work, and to develop the visual realisation of ideas about science and the amateur more fully through installation. These insights have developed through temporarily abandoning the idea of an object-based studio practice.

Community engagement

Not initially planned as part of the methodology in terms of gathering data, community engagement became a growing part of my creative offering. My first public live moth trap opening event (with hand-held camera up the ladder onto my North London roof) was held online as part of the *Urban Tree Festival* during lockdown, 24 May 2020.

For the *Places to Intervene* exhibition, I ran a morning moth-identification session on 21 August 2021 at Phytology, Bethnal Green Nature Reserve. With twelve attendees, we explored the specific niches for more-than-human life that can be found even in a very built-up part of London. One attendee invited me to take part in a COP26 celebration at St. James' Piccadilly in November, to explore the urban ecology around the church. As this was too late in the season to carry out a live-trapping and identification session, I collaborated with Paul Wood, author of *London's Street Trees* to produce a walk-and-talk around the church garden. This gave me the opportunity to write a series of short thematic texts, uncovering the relationships between urban trees, insects and seasons, and the impacts of environmental change, providing context to Paul's botanical expertise. Simple awareness-raising events at the moment, such collaborations present the groundwork for a more evolved creative platform to develop creative writing and performance opportunities in the future. What has been primarily gained through

these activities are the relationships and meetings with people, including creative directors of arts venues, biodiversity specialists, wildlife volunteers, all rooted in specific locations. The experiences and connections have provided a way to develop an expanded practice beyond the studio.



Fig. 6.8: *Moth identification workshop at Phytology, Bethnal Green Nature Reserve, Places to Intervene in a System, 21 August. Katherine Pogson 2021*

6.2.3 CHROMA Ensemble Fair Isle tour

CHROMA Ensemble visited Fair Isle between 23 September and 1 October, 2021. The company consisted of three musicians, myself as artist, programme deviser and workshop leader, and Claire Shovelton as producer and facilitator. Themes of migration and movement from *Towards Light* structured an evening concert programme where the film was screened. We ran art and music sessions with the school, and I devised a textile workshop attended by islanders of all ages.

CHROMA ensemble has a close association with Fair Isle, having visited regularly since 2002, bringing contemporary classical music to the island and engaging members of the community in creative workshops. My aim was to develop collaborative practice further through working with musicians, and to trial ideas of materialising environmental experiences through a textile workshop.

‘Why moths?’ is not a question that the Fair Isle community needed to ask in relation to our project (though a briefing document for our own CHROMA cohort was necessary). The community understands the importance of biodiversity very well, and contains many highly knowledgeable scientists, environmentalists and practitioners. This allowed knowledge-sharing to develop through informal conversations as well as the workshops themselves. Transporting an urban project to a small island community of around fifty people gave an interesting perspective on ways to communicate the larger debate. The unique location of Fair Isle at the northernmost limits for much of European biology makes it an ideal starting point for telling stories of ecological engagement between species. Fair Isle is not an outpost, nor a stepping stone to Scandinavia, but a laboratory for valuable insights into changing global patterns, and a model for the rest of the UK and beyond. Global heating has resulted in the movement northwards of many insects as more habitat becomes suitable, and those who require cooler conditions retreat (MacGregor et al. 2019). Fair Isle’s ecologically literate and active community records biological data at the Bird Observatory¹⁴⁴ (despite the fire of March 2019) and elsewhere on the island, providing key insights into this phenomenon. With its longstanding monitoring of migratory and wind-assisted species, ‘Fair Isle is on the map and active, despite most folk thinking we are a mysterious rock in the

¹⁴⁴ <https://fairislebirdobs.co.uk>

middle of the North Sea” (Nick Riddiford, resident ecologist and Butterfly Conservation Scotland volunteer). Fair Isle is not losing habitat, neither is it prone to light pollution. Thus it provides an example of how environmental knowledge embedded in communities, especially alternative approaches to land stewardship can inform future ways of living that coexist with more-than-human nature.

My sessions included:

1. Introduction: Moth discovery session for the school.
2. Field notebooks and Phenology Wheels workshop for the school.
3. Weaving to Form activity for the whole community.
4. Moth collages in paper for the school.

The full programme of workshops can be found in Appendix F. 3.

The school workshops



Fig. 6.9: First day of school workshops with local ecologist Nick Riddiford. CHROMA Ensemble Fair Isle tour, 24 September. Katherine Pogson 2021

At the time, the school only had three pupils aged between four and nine, whose relatives regularly undertake moth-trapping. Local ecologist Nick Riddiford brought in his specimen collection to start us off. Our visual workshop centred on

the lifecycles of local moths through drawing phenology wheels. The older pupils understood the activity well and produced some very detailed diagrams.



Fig. 6.10: Phenology wheel, school workshop, Fair Isle CHROMA Ensemble tour, 24 September. Katherine Pogson 2021

The textile workshop acted as a testing ground for communicating my approach to materialising ecological engagement using the process of ‘weaving to form’, learned through the skills swap with Southern California Fibershed¹⁴⁵ (discussed in 6.3 below). This was my first attempt to communicate processes from my studio practice in a public engagement activity. Islanders have world-famous traditions of textiles, music and environmental awareness; every adult and child in the community has signed up to a marine conservation charter and has good knowledge of the local flora and fauna. Therefore, our purpose was not didactic, but rather to observe how a community with a very different ecological relationship to my urban one would respond to the film and research. The workshop introduced visual data in the form of maps, graphs, local species accounts and photographs via

¹⁴⁵ <https://www.socalfibershed.org>

a slide show, and participants chose a 'species story' to weave, creating their own outline shape and visualisation. Outlines were traced onto wooden boards and hammered in with copper nails, on which a framework of warp threads was strung. As we only had three hours, it was more of a proof of concept than a detailed exploration of the possibilities. The participants took to it eagerly, demonstrating an enthusiastic, creative and lateral-thinking approach to their individual weaving substructures and many told stories about their own observations and memories of the chosen creatures during the show-and-tell at the end.



Fig. 6.11: *Community textiles workshop, Fair Isle, 25 September*. Katherine Pogson 2021

Collaborating with CHROMA opened up new avenues to articulate the substance of my fieldwork in experimental creative formats, including translating the themes into non-visual form through discussion of the musical programme. Because of time limitations, the impact of the pandemic on live performance and related financial strains, the original through-written performance was not developed in time for the tour, but remains a potential project in the future. Instead, we devised a

concert programme around the theme of dark to light and winged insects. The successful working relationships laid a good foundation for future projects, including educational workshops, and future musical programmes.

Comments from the Fair Isle community after the event included:

“Chroma is not just a group of visiting artists; They enrich our lives here.”

“Each and every member of the group brings so much... of course beautiful music, but also fun and engaging creative workshops for all ages – something quite special when we live in the UK’s most remote island community.”

– Secretary, Fair Isle Development Company.

“Thank you so much for the great work you did with school children. The process worked through, skills practiced and knowledge shared along with so much creativity has very much enhanced the children’s curriculum this term and beyond.”

– Head Teacher, Fair Isle school.

Please see the report in Appendix F. 3 for more details.

6.3 Textiles

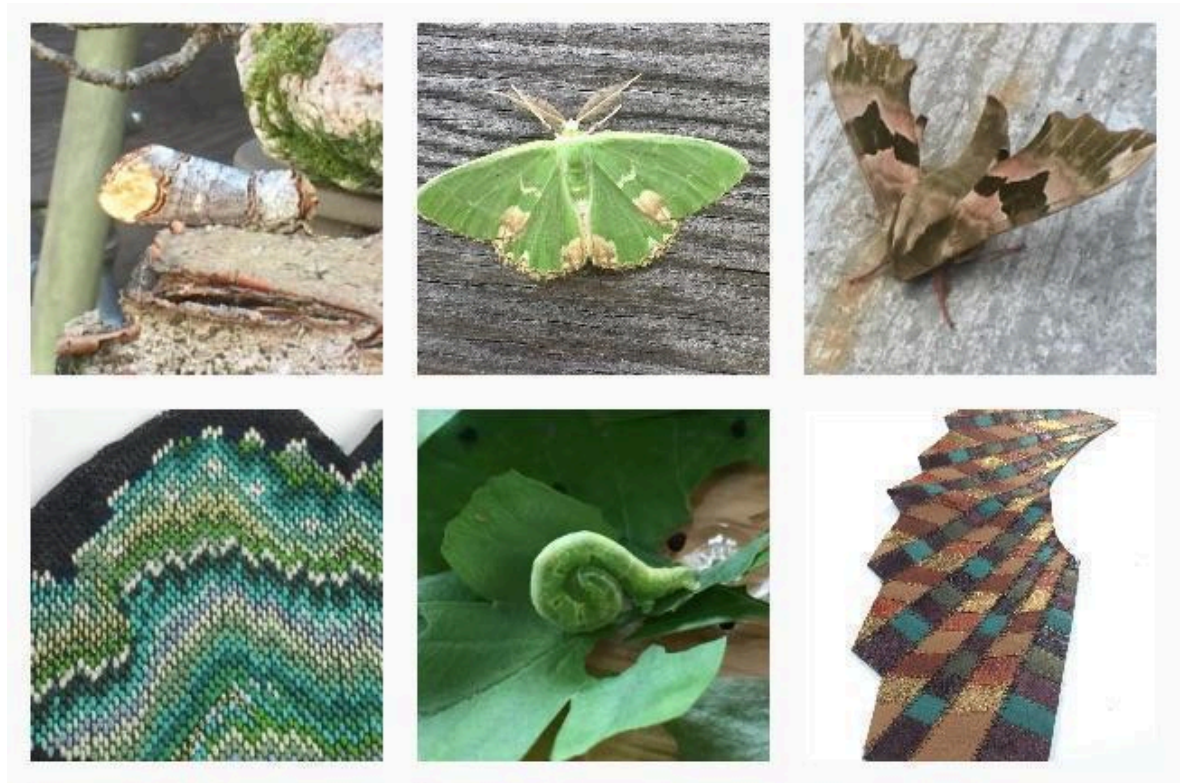


Fig. 6.12: *Practice in progress 2015-18*. Montage. Katherine Pogson 2018

Two different aspects of experimental textile practice were developed through the research. The first works at human scale in sculptural wall pieces, while the second interrogates the concept of the companion object, a two-part artefact that provokes dialogue about human/nature relationships. I seek to invert connotations of domesticity and repair attached to textiles to speak of creatures usually associated with nuisance and damage and reframe labours of care, hitherto characterised as mundane and routine, as an act of resistance to human-centric environmental ignorance and damage. (The word ecology is rooted in *oikos*, meaning home).

6.3.1 Wall-based work

My previous creative practice originated in craft traditions of material manipulation using leather as a primary material. For this research, I began by exploring the physical characteristics of moth species encountered in my fieldwork. Very early work can be seen in figure 6.12 above, demonstrating a decorative response to surface pattern and texture. *Holeslack* (figure 6.13 below) is a digital cartoon for an embroidered leather piece from 2017 (using up a remnant

from my previous practice). The image originated in a New Year's Eve encounter in Cumbria, when moths are scarce. A single Winter moth *Operophtera brumata* splayed against the lit window of a farmhouse kitchen gave me a visual starting point, later included in the narrative of *Towards Light*. The design applied a method of stitching into perforated lamb nappa to create a tufted surface, developed during my leatherwork practice. As well as being impractical to embark on such a large, labour-intensive embroidery project at this stage in the research, the design fell into the representative seam of craft from which I wanted to move away.



Fig. 6.13: *Holeslack*. Digital design for an embroidered leather wall-hanging. Katherine Pogson 2017

In 2016-17, I began working with fabric, manipulating volume and texture in a direct three-dimensional sketching process. Projecting fieldwork photographs onto the wall, I used my body as a measuring tool. Scaling the image up to my own proportions located a point of anthropomorphic relation between anatomical structures (figure 6.14). The particular morphology of insects highlights their environmental attunement. Their radical difference to human bodies challenges us to reassess our own relationship with the materiality of nature, a challenge made

more acute when the Anthropocene moment questions human ideas of mastery and control. Bringing my body into the process kept the theme of relations between species alive. This was also a sensory approach, where the texture of resistant fibres aids the imagination of alternative body structures, scales, hairs, and membranes, breaking down conceptual barriers and opening the possibility of empathy and kinship with the more-than-human.

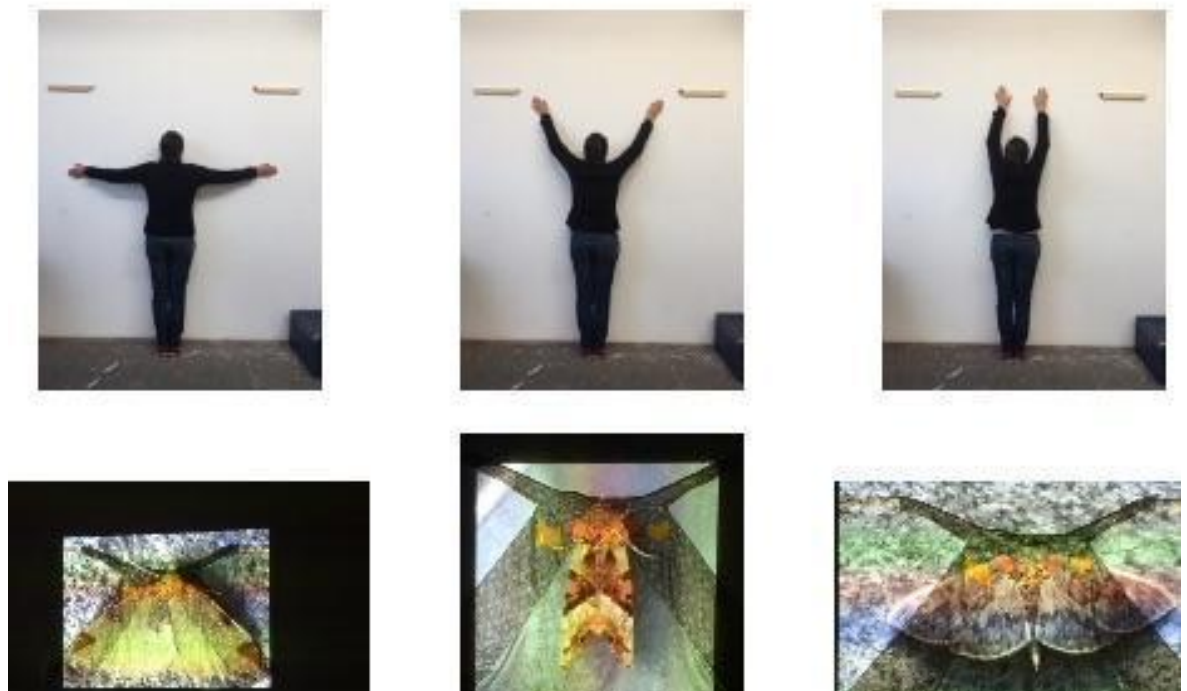


Fig. 6.14: *Studio experiments with body measurements*. Charity shop clothing, projection of moth photographs. Katherine Pogson 2016

My sketching materials, synthetic lace and glittery party dresses sourced from local charity shops, represent the gaudier end of fast fashion occasionwear (figure 6.15). Sequins recall the scales on a wing, while the acrylic materials are the opposite of what is considered 'natural' or good taste. Designs with animal and jungle themes evoke exotic nature as a visual trope, a useful dissonance with the artificiality of the material. In *A Moth Journey* I reflected that such fabrics might be my local materials. Thus, I sought to engage with the human-generated recombination of atoms and materials that marks the Anthropocene.

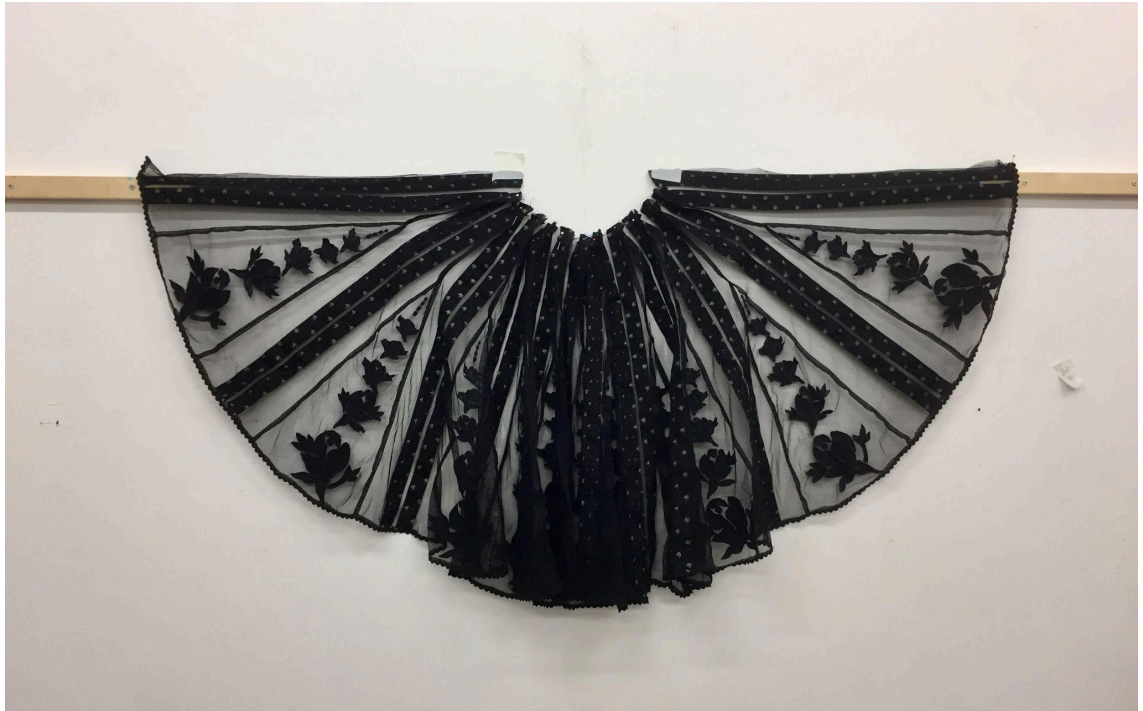


Fig. 6.15: *Stoke Newington Alchemist textile sketch*. Charity shop textile, acrylic net, satin, polyester thread, sequins. Katherine Pogson 2016

My intention was not to represent, but to dislodge preconceived ideas about the nature of insect bodies through a proportional resonance with my own. However, draped textiles often take on triangular or wing shapes, leading back to representation. Textile manipulations were an early entry point for synthesising experience and material languages, but on reflection the literalness of the forms became redundant quite quickly. While the scale challenged notions of fragility, mimicking moth morphology inadvertently reinstated the insect in a subject position by isolating it from its context. I was recreating the fixation on visual forms as a stand-in for deeper exploration of the environmental context that I was intent on critiquing. The haptic qualities of textiles have strong communicative potential that I continued to pursue. I experimented with the technique of rag-rug weaving, with its long history of repurposing materials, but the rectilinear nature of warp and weft seemed confining (figure 6.16).



Fig. 6.16: *Rag rug weaving sample*. Cotton, wool, silk. 16cm x 8cm. Katherine Pogson 2017

In a skills exchange with the sculptor Caroline Achaintre¹⁴⁶ in 2017, I trialled the technique of gun-tufting. Achaintre's large wall pieces inspire both through their scale and the way that they escape the grid structure of weaving (figure 6.17). The technique shoots loops of wool into a pre-woven substrate, allowing asymmetric outlines to be cut out afterwards. While my visual results were still observational, asymmetry and texture remained elements to pursue (figure 6.18).

¹⁴⁶ http://instagram.com/caroline_achaintre



Fig. 6.17: *Bat 8*. Hand tufted wool. 275 x 280 cm. Caroline Achaintre 2018. Photo: Oriane Durand



Fig. 6.18: *Gun-tufting skills exchange with Caroline Achaintre*. Katherine Pogson 2017

I was introduced to the concept of weaving-to-form by the Southern California Fibershed. The group invited me to give a talk on my research, based on the chapter I wrote for *Design and Nature: A Partnership*. Continuing the spirit of the gift-exchange mentioned above, I asked to join an upcoming weaving-to-form workshop online in lieu of payment. Originally developed to minimise waste in cutting garment pattern pieces, copper tacks are nailed into a board to make an asymmetric warp structure. The resulting map-like irregular shapes liberated me from the grid-like constraints of the loom.

The Day Everything was Yellow

I considered how to express the sensory memories of a moth-recording encounter in a visual, tactile piece that also incorporated the data. To combine species data and geological maps as structural starting points, I apportioned colours and textures according to the species present in a trap on a certain day, and hand-tufted them into a map-like outline of the local area (figure 6.19). This process can be described as a visual structuring activity, based around generating and liberating meaning, that “allows relationships between data to emerge that might have otherwise remained hidden” (Leavy 2015, 244). Layering different types of data repositions the trap events as relationships, expanding the types of knowledge recognised as valuable. The recorder’s emotions become part of what is scrutinised, creating a fuller record of the encounter.



Fig. 6.19: *The Day Everything was Yellow*. Weaving-to-form sample. Cotton, wool, silk. 30 x 18cm.
Katherine Pogson 2020

The energy of works such as those encountered in the exhibition *Madge Gill: Myrninerest* (William Morris Gallery Walthamstow 2019, figure 6.20) suggested a way to use texture, outline and three-dimensionality in a less literal way. Gill's works, part rug, part sculpture, are outsider art and were produced as a response to trauma. They recall the notion of craft as an oppositional stance and, for me, suggest stitching as a healing process, one not only carried out by humans.



Fig. 6.20: *Tapestry*. Date and dimensions unknown. Madge Gill: Myrninerest, William Morris Gallery, Walthamstow, September 2019



Fig. 6.21: *Weaving-to-form sample*. Mixed fibres. 30 x 12cm. Katherine Pogson 2019

The fractured forms of these textile starting points reflect the sense of anxiety and chopped-up attention spans that constitute day-to-day living in the twenty-first-century. Helen Marten's Turner prize-winning exhibition at Tate Modern in December 2017 exemplifies this vision (figure 6.22 below). While not explicitly addressing the biologically more-than-human, Marten's installation of human detritus and imperfectly recombined objects prompted me to develop a short text '*What will evolve?*' in October 2017 alongside this textile work (Appendix D). The reconstitution of human-worked materials is here positioned as an ameliorating environmental process undertaken by the more-than-human to reverse the material dispersal represented by the Anthropocene. Activities characterised as 'ecosystems services' are in fact essential expressions of more-than-human cultures, concerned with maintaining the systems of life on Earth. Human adoption of a more caring attitude to the environment for future flourishing will involve repairing and restoring some critical aspects of landscapes to allow ecological assemblages to re-establish themselves (Wilson 2016).

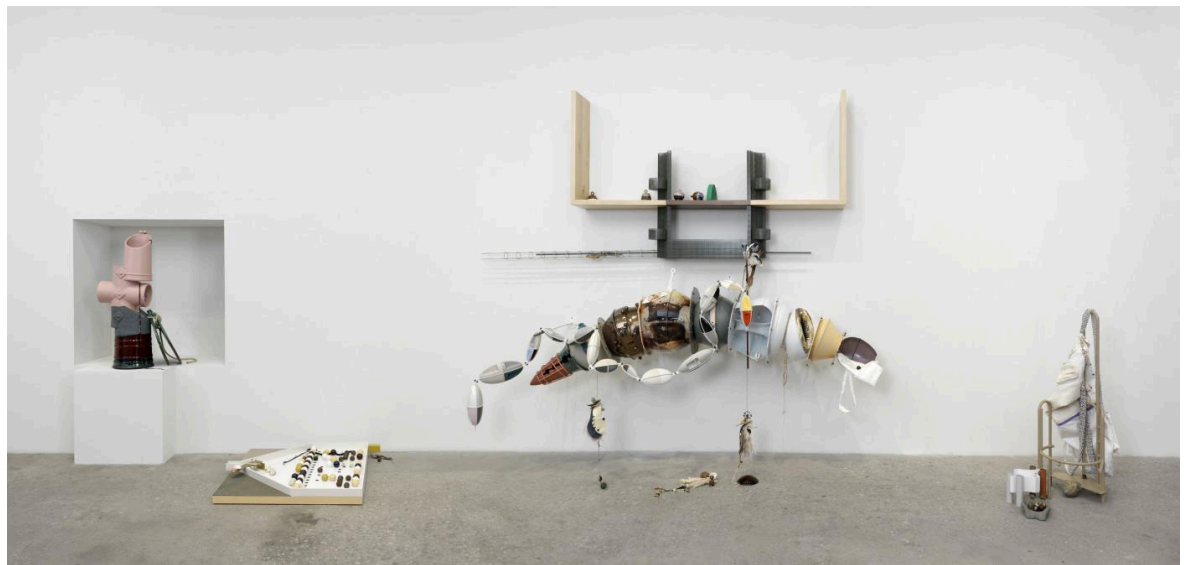


Fig. 6.22: *Helen Marten: Turner Prize exhibition*. Installation. Tate Britain 2016

Devoured/Pelt For A Creature That Does Not Yet Exist

An ongoing project named *Devoured* develops the Anthropocene theme of material recombination. Mixing inherited and long-owned pieces of my own clothing with the sequined dresses collected from charity shops continued my process of reworking disregarded fabrics as a cultural material. Abundant, rarely worn and

hard to recycle, using fossil-fuel derived, short-use/long-life materials to debate ideas about nature brings ideas about value to the fore. Signs of previous use and wear add layers of narrative to a work, where reuse reflects finite resources. Repurposing pre-existing materials responds to changing environmental paradigms where previous uses are no longer relevant.



Fig. 6.23: *Devoured, work-in-progress*. Wedding jacket deconstruction: gold synthetic lace, pink silk, buttons, polyester thread. Katherine Pogson 2018

My process imagines posthuman environments, wondering how synthetic throwaway fashion will be broken down and ingested by more-than-human entities in the future. In early three-dimensional textile sketches for *Devoured* (figure 6.23) I deconstructed my discarded lace wedding jacket, to think through notions of fragility, rarity and value. The piece develops the concept of nourishment, reflecting on themes of starvation and abundance, as the causes of moth species decline and extinction are rooted in loss of food plant diversity and fragmentation of habitats. The addition to my fieldwork of caring for caterpillars

made the responsibility to provide sustenance highly personal, and highlighted my ecological ignorance about the specificity of foodplants required. I found a resonance in the first post lockdown exhibition I visited: *Iqshaan Adams: Kicking Dust* (Hayward Gallery, London 2021, figure 6.24). Adams uses beads, ropes and bits of cheap jewellery wire to build up a ground for monumental tapestries that feel both rich and scavenged, evoking a strong feeling of place.



Fig. 6.24: *Iqshaan Adams: Kicking Dust*, Hayward Gallery, London. June 2021. Photo: Katherine Pogson

Devoured was reworked in 2024 for an open studios exhibition at Proposition Camden into *Pelt For A Creature That Does Not Yet Exist* (figure 6.25). The wall-hanging develops the idea of insect-like creatures repairing the material fabric of their environment by ingesting, regurgitating, and piecing together elements that have been irradiated, transforming what has already been transformed. The label (here in the blue box), drawn from an earlier text of mine *What will Evolve?* (Appendix D) suggests how organisms mutate, DNA codes are reassembled, blueprints are partial – or maybe the intelligences reading them are interpreting them from a different perspective.



“Can we help but suspect that all the time that we imagined ourselves to be thinking about inanimate objects, we were ourselves being “thought” by other entities?”
 – Amitav Ghosh, 2016. *The Great Derangement: Climate Change and the Unthinkable*. University of Chicago Press, 2016 p.31.

What will evolve in our posthuman world? What will absorb and grow out of the landfill? In the fundamentally altered geology of an extracted, discarded, ‘single-use’ landscape, through the process of breaking down, ingesting and reclaiming molecules, what qualities will be expressed? Unpicking the toxic residue of the failed Anthropocene project may result in surprising combinations and incompletely digested or misremembered elements. The blueprint is incomplete as yet. It’s a work in progress... insects resume their role of manipulating the ‘fabric’ of the environment.

Wax moth caterpillars ‘eat up’ the plastic bags buried in the soil, altering their DNA in the process. Spiders spin over the holes where resources have been exhausted. The altered chemical composition of the atmosphere affects their habitual practice, recalling Peter Witt’s famous 1948 photographs of the ‘effect of psychoactive drugs on European garden spiders’.

Fig. 6.25: *Devoured/Pelt For A Creature That Does Not Yet Exist*. Text and dismantled vintage, inherited and second-hand garments: synthetic gold lace, silk, interfacing; Lycra, acrylic, metal sequins, polyester net, acetate lining; 1930s embroidered viscose sleeve; metal and polyester thread, wire, plastic buttons, enamel disc. 120 x 100cm. Katherine Pogson, 15 June 2024. Photo: Crispian Blaize

6.3.2 Companion Objects

What counts as an object is precisely what world history turns out to be about.

– Donna Haraway. *Situated knowledges: The science question in feminism and the privilege of partial perspective*. *Feminist Studies*, Vol. 14 No. 3, 2018, p.588.

The concept of the companion object allowed me to focus on specific encounters, to interrogate the role of object-making in a time of ecological crisis. The research deconstructed my approach to making, to redirect the beliefs materialised towards more-than-human ends in a reflective process that asks “What truly nourishes you?” Companionship between species was a theme from the start of the research, inspired by the tied-together objects in the Pitt Rivers Museum (figures 0.2 and 0.4). Questions of sustenance developed further through the caterpillar care diaries, providing an entry point to ecological care as a matter for public debate.

Initial experiments focused on the expressive potential of the contrast between the two joined forms using found objects and remnants of previous leatherwork (figure 6.26). This strand was a continuation of the Pitt Rivers Museum residency, described in the Prologue, and once the PhD programme was under way, I turned my attention to responding more directly to the fieldwork.



Fig. 6.26: *Companion object 3D sketches*. Vegetable-tanned leather, woollen and leather found gloves, linen thread. 12 x 30cm. Katherine Pogson 2016

Empress of Skye

Moth-recording on the Isle of Skye in spectacular weather in May 2016 prompted my first direct response to a fieldwork encounter. A female Emperor moth (a large species I have never encountered in London), lured by my trap of the previous night, buzzed urgently out of the undergrowth and laid five eggs on my foot (figure 6.27). The shock highlighted my personal culpability when interfering in more-than-human lives. The sharp learning curve (I considered glueing the eggs onto a nearby plant with flour paste) is recorded in the first *Caterpillar care diary* and began my thematic focus on the concept of *care*.



Fig. 6.27: *Emperor moth lays eggs on my foot, Skye, 6 May*. Photo montage. Katherine Pogson 2016

To memorialise the encounter, I applied my pre-existing technique of embroidering perforated leather to a much-loved, worn out shoe (figure 6.28). This first experience of guilt generated a series of autoethnographic reflections chronicling my journey to ecological literacy with other moth eggs and larvae during my research. I did not seek them out or take them from the wild, but when confronted with them as a byproduct of the light trap, I attempted to nourish them to emergence. The embroidered shoe is not the focus of the story, but an artefact recording the encounter as a site of ecological learning.



Fig. 6.28: *Empress of Skye shoe*. Used leather shoe (agnès b) cotton thread. Katherine Pogson 2016

Corpse Cone

Returning after a year's break in 2019, I concentrated on synthesising memories from the sensitising process of the multispecies fieldwork with the themes distilled from theoretical reading and autoethnographic reflection. Ethical dilemmas caused by my ignorance of how to care for some specimens, and the guilt experienced when damage or predation took place, became the focus for specific works. The works provide an entry point to wider narratives of damage and violence done by human actions that can be pursued in future projects.

The dismay of discovering a parasitised Light Emerald *Campaea margaritata* larva still attached to its twig, its head an explosion of mould, is recorded in the *Caterpillar care diary 5* and informs a second strand of textile experimentation. Two other caterpillars lay entirely encased in a caul of white fungus (figure 6.29).

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... in the evening, these two were on the bottom of the box. One was clearly dead, and the other was on its side, still moving slightly. I tried to lift it with a paintbrush carefully onto a branch but the next day it too was dead. The runt, which had been clinging to a branch, was sticking out at a strange angle, and its head was a cloudy burst of mould.



Fig. 6.29: *Mouldy Light Emerald (Campaea margaritata) larva, 19 December.* Katherine Pogson 2021

Experimenting with techniques based on the construction of pom-poms to evoke the spongy quality of this failure to thrive (figure 6.30), I came across the work of sculptor Will Cruickshank.¹⁴⁷ Cruickshank's thread-wrapping method suggested a way to develop the pompom technique by using layers of colour to create a dynamic reveal when the wrapped objects are cut open.

¹⁴⁷ <https://www.willcruickshank.com>



Fig. 6.30: *Mouldy head pompom trial*, 7 August. Katherine Pogson 2022

I wrapped remnants from weaving and knitting around a discarded industrial yarn cone, then sliced it open to reveal the inner layers. The mixture of threads suggest material toxicity and wastefulness, while the slicing is an act of violence that opens a poisoned more-than-human body to the inspection of an autopsy. The poignancy of the splayed carcass is heightened by an accompanying text (figure 6.31). *Corpse Cone* is a first prototype in a direction that develops the theme of *damage*. I improvised a winding mechanism by clamping a drill to a table but this presented safety concerns. Further development requires investment in or access to proper equipment to overcome the technical challenges and achieve greater control. This project was my first to include a short text or poem as integral to the piece (outlined in blue below) when exhibited at an open studios event at Proposition Studios, Camden in June 2023. This continues my use of text to further contextualise the textile work.



Undoing.

The carcass is unravelling. The big reveal. What might be a ribcage (though there are no ribs) arches up as in the act of breathing (though there are no lungs).

Sliced away, the wrappings fall to either side, exposing the cavity.

(Petals explode from their bud; the imago crawls from the caul of its brittle chrysalis; inflating slowly).

Inner structures in surprising colours insist, almost, on something that should not be seen.

Fig. 6.31: *Corpse Cone*. Text and Wool, mixed fibres. 26 x 12 x 6cm. Katherine Pogson 2022

Empress of Skye and *Corpse Cone* develop my three-dimensional sketching process, and, while they leave the literal image of two connected objects behind, they retain strong hints at doubleness, through the absent, undecorated partner shoe, or the symmetry of the parted threads. They are companion objects in that they reflect on ethical aspects of interspecies relationships.

A Miser's Purse

Themes of starvation and abundance were examined through a series of textile works using the miser's purse to develop the concept of the Companion Object. Miser's purses are decorative fabric pouches with two lobes, used to carry coins and popular in the 19th Century. A central opening with a slit allows the contents to be diverted into one side or the other. This binary structure resonates with the Companion Object concept, suggesting two fundamentally different forms of life joined together, though perhaps opposed in other ways. Experiments from 2017 continued my processes of embroidering into found, remnant and second-hand substrates. I used garlic nets (figures 6.32 and 6.33) to introduce a narrative about sustenance in contrast with the decorative stitches and beadwork of a desirable object. This is the work I could not finish at the work-in-progress event in 2018.



Fig. 6.32: *Garlic in a net. Miser's purse starting point.* Katherine Pogson 2023

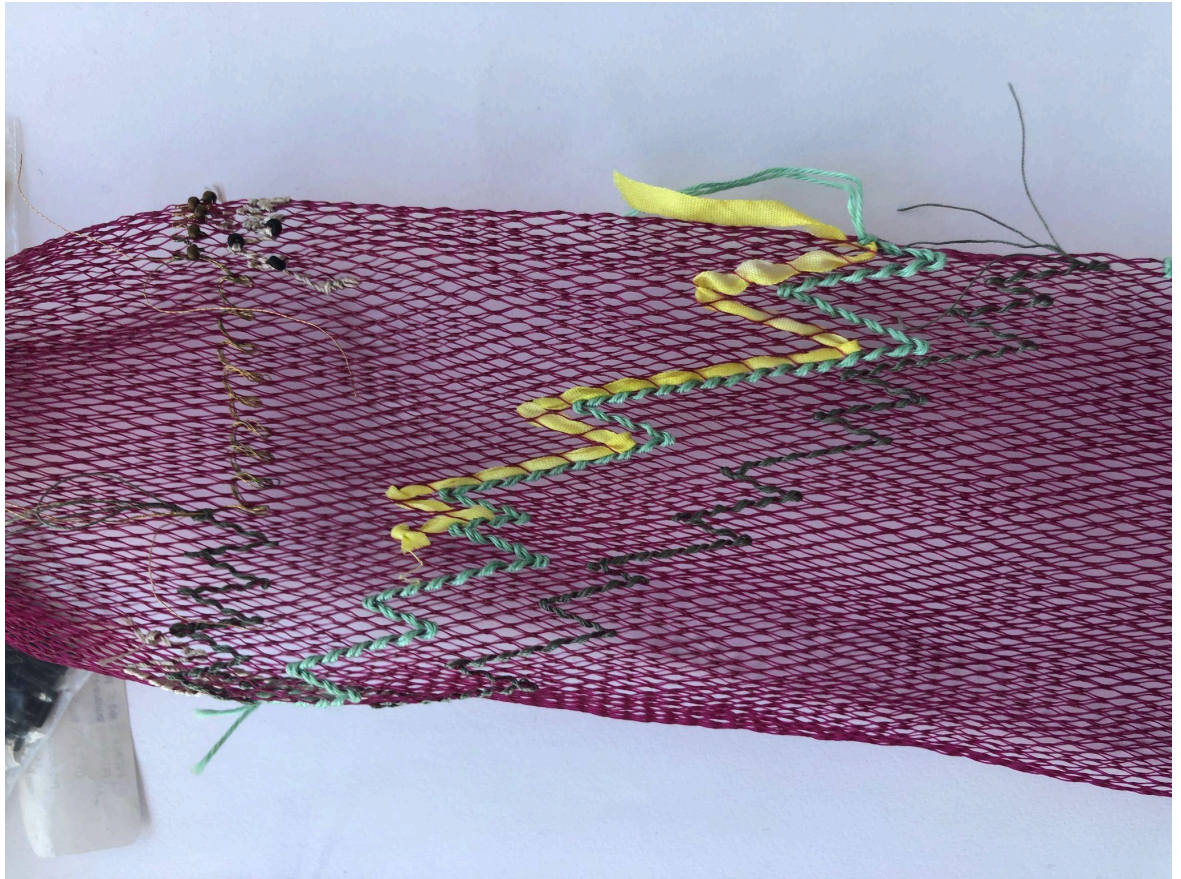


Fig. 6.33: *Embroidery test on garlic net for miser's purse*. Katherine Pogson 2023

At the open studios event at Proposition Camden in June 2023 I revisited the miser's purse idea, applying it directly to a story about nourishment and ecological literacy based on a specific species. White Plume *Pterophorus pentadactyla* is a micro moth that feeds on convolvulus bindweed. Using vintage lace I fashioned a miser's purse with a convolvulus flower at one end, suggesting both the visual quality of the moth and its foodplant. A museum-style label presents further lifecycle information, suggesting that the object might be extinct, but also for sale (figure 6.34). I continued to include short texts alongside the objects as part of an installation, building on ideas from the lepidopterist's desk at the *Places to Intervene* exhibition.

The installation included figure 6.36, moth specimens and paraphernalia, and a box of half-worked bobbin lace dating from 1915 in which I found the empty chrysalis of a clothes moth, *Tineola bisselliella*, attached to one of the spools (figure 6.37). The idea was to give a glimpse into the mind, and private working space of the citizen-scientist-artist.



A Miser's purse

A long mesh tube with a central opening, worn hung from the waist. This bilobed structure was used to separate coins of different value. Different shaped ends helped the wearer find the required compartment by touch alone.

The labour of making and giving a miser's purse, highly visible in domestic settings, signalled friendship or love from a female in Victorian times. Extending the self to another through devotion to a task could suggest both selfless charity, and, as in the gift economy, the creation of certain obligations to reciprocate.

With its central slit secured by two rings, the miser's purse also alluded to the generative, sexual promise of matrimony, and was a popular gift on betrothal.

The image of two dangling compartments, stuffed or sagging, suggests choices to be made, values to be assigned. Generosity or meanness, avoidance or acceptance: a time for decision.

Fig. 6.34: *White Plume (Pterophorus pentadactyla) miser's purse*. Text and vintage lace, cotton, stone, velvet, silver wire, paper. Katherine Pogson, July 2023.



Fig. 6.35: *White Plume (Pterophorus pentadactyla) miser's purse, detail*. Katherine Pogson 2023

Creature that does not yet exist

Figure 6.35 was made for the Open Studio installation, continuing the theme of mixing materials to suggest playful posthuman recombinations. It responds more directly to the original companion object image by suggesting a winged organism tied to a defunct piece of technology. This set of textile desk objects develops the theme of nourishment by imagining a posthuman scene where creatures such as the Wax moth *Galleria mellonella* are patiently digesting plastic to remake the synthetic landscape and where attempts to repair the 'fabric of nature' are a work in progress.¹⁴⁸ The blueprint is incomplete as yet. The more-than-human labour of unpicking the toxic residue of the failed Anthropocene project results in surprising combinations and incompletely digested, or misremembered, elements.¹⁴⁹ This

148 "We report here the fast biodegradation of PE by the waxworm, the caterpillar larva of the wax moth *Galleria mellonella* of the snout moth (*Pyralidae*) family of Lepidoptera." (Bombelli et al. 2017, R292).

149 As exemplified by Sheldrake's description of mushrooms remembering their long history of decomposition: "McCoy... likened fungi to jailers with bunches of enzymatic keys which can unlock certain chemical bonds. Some might have the right key ready to go. Others might take a week to riffle through the bunch of keys, trying different ones until they get lucky." (Sheldrake, 2020, 203).

deliberately anthropocentric vision invokes humour to interrogate the human hubris that persists in placing itself centre stage, even when imagining other creatures cleaning up our mess! Objects patched together in slightly tongue-in-cheek ways question both the hope that ‘nature will sort it out’ and the assumption that these efforts are going to be a bit wonky. This is what I hoped to express through my object work.



Lace

This careful work is insect-like.

A tiny hook, a mouth, repeats a twisting movement, patiently forming skein by skein a structure on which things can be built.

Mandibles manipulate a single thread, producing volume, depth and heft.

Tiny acts of repair, bringing this edge to meet that – again, rhythmical – generating a ground, a basis, the fabric.

Fig. 6.36: *Creature that does not yet exist*. Text and vintage cotton lace, leather, silk, plastic wire, human hair, LED. Katherine Pogson 2023

This piece was a forerunner to *Devoured/Pelt For A Creature That Does Not Yet Exist* (figure 6.24 described above). The textiles works described here are prototypes and

samples, emphasising the ongoing theme of thinking-through-making (Ingold 2013) as a process for reintegrating with the environment in posthuman terms. It was not possible to develop more resolved material outcomes within the economic and time constraints of part-time unfunded research. However, by contributing understandings from the process, the textile practice shares a methodology that can be useful to other practitioners.



Fig. 6.37: Cotton lace bobbin from 1915 found boxed in a charity shop, with the remains of a moth life cycle attached. Katherine Pogson 2023

Chapter summary

Chapter Six has shown how a process of multispecies fieldwork and autoethnographic reflection can transform the intentions of the artist, the subject matter they wish to communicate, and the forms these outputs might take. The aim was to reframe my creative practice through the development of ecological literacy and to move beyond the uncritical use of biological forms while avoiding an issues-based didactic approach.

The fieldwork shifted my motivation away from the urge to make physical objects to the learning process in itself, opening up the range of means of expression and also suggesting their limits. Activism through social engagement and practical conservation efforts have become part of my expanded method for communicating a multispecies sensibility. My original practice adapted to incorporate a more explicit use of environmental context as a source for creative focus, through recognising my subject position. This crystalised specific themes of interspecies relationships, bringing personal and emotional elements into the frame, pinpointing ethical responsibilities that span the different sensory apparatus of moths; nourishment; guilt and remorse for damage; and obligations of care. Together, these present a roadmap for companionship with the more-than-human.

A multispecies autoethnographic method allowed the identification of fragmentary, allusive narratives drawn from the emotional impact of interspecies encounters. At the same time, the diary form offers a bridge between autoethnographic reflection and studio-based practice, opening the door to narrative devices that encourage fresh engagement with the natural world from a decentred human perspective by validating otherwise marginal experiences. Articulating such narratives produces texts in their own right, but also lays the groundwork for further exploration through collaborative and material practice.

Arts-based strategies of metaphor and imagery (Sullivan 2010) are visualisation tools that, applied to both making and writing, place experience into context. For Gillian Rose, visual methodologies focus on “how images construct accounts of the social world” (Rose 2007, 195). Yet critically assessing a visual approach to privilege other senses reveals unexpected aspects of more-than-human modes of existence that require multimodal means of expression.

Chapter Seven – Understandings



Fig. 7.1: *Up the ladder to the roof*. Katherine Pogson 2016

Conversations among ourselves have always had other participants.

– Amitav Ghosh. *The Great Derangement: Climate Change and the Unthinkable*. University of Chicago Press, 2016, p.31.

My central research question asked how multispecies fieldwork may influence a craft-based practice to communicate a decentred human relationship with nature. The task has involved critically assessing environmental stewardship to retain its notion of care, while jettisoning the idea of human control as central. A multispecies sensibility requires the development of an ethical understanding of the independent lifeworlds of more-than-human assemblages, recognising the need for human withdrawal in some circumstances to allow them to flourish.

7.1 Insights

Through reflecting on my experience of citizen-science moth recording in the UK, I developed a multispecies autoethnographic method applicable to ecologically-engaged craft practice. The method decentres object-making as a primary goal to make room for an embodied and conceptual response to fieldwork that is not predetermined by habitual material processes. Multispecies fieldwork prioritises extensive ecological research, allowing deeper critical development of theories and concepts, and the testing of preconceived ideas. Reflection on the situated position of the researcher in turn may produce narratives that fundamentally alter the practice focus. Multispecies fieldwork redirects the form, content and intention towards a more conscious expression of ecological awareness. The resulting creative outputs promote a decentred human relationship with nature in three ways.

The creative research and practice encourage greater ecological literacy. Place-based narratives presenting a more-than-human perspective, such as through the insect population, highlight how human flourishing is nested within, and dependent on, but not central to, a much larger range of interdependent multispecies assemblages. This is especially useful where urban living alienates humans from the lifeworlds of other organisms.

Empathetic storytelling that challenges cultural stereotypes communicates the possibility for responsible companionship alongside the more-than-human. Creative works of this kind shine a light on vulnerability, recognise neglected subjects for cultural debate, and encourage plural and communal practices to become part of the social fabric.

Active practices of environmental care can develop from engagement in such debates through a change in perspective. In encounters where power differentials and contrasting ways of being exist, attending to the need for care leads to taking on the responsibility for meeting it and becoming competent in its provision (Tronto). While my care focused primarily on more-than-humans, feedback from the collaborative process, exhibition and tour of *Towards Light* show that the attitudes embodied in the text and film have influenced the language that audience members and collaborators use when addressing creative projects, denoting a decentring cognitive shift that has a subtle and lasting impact. This is discussed in more detail in 7.3, the contribution made by the practice.

7.2 Addressing aims and objectives

To inform the development of creative practice, a theoretical framework for decentring the human within nature relationships was developed from post-anthropocentrism, feminist environmental philosophies of care and multispecies ethnography (Aim One).

7.2.1 Critical contexts

By redefining humanity's conception of its place within environmental relationships in the light of technological development, post-anthropocentric philosophies question the value systems that implicate our species in causing the environmental crisis. As a stimulus for creative practice, post-anthropocentric thought directs attention towards exploring more-than-human lifeworlds on their own terms, questioning biological hierarchies (such as notions of consciousness) and acknowledging vulnerability through shared organic origins. Such ethical considerations are developed in feminist environmental philosophies of care that present visions of relational futures (Haraway), and strong arguments for extending social and cultural values of care towards the more-than-human (Plumwood, Puig de la Bellacasa). Through highlighting power imbalances based on prejudice, these writers draw attention to overlooked labour and marginalised populations. Together with an emphasis on the biological basis for relational ontologies (Margulis) and concrete evidence from physics (Barad), feminist

environmental philosophies contribute roadmaps to compelling narratives for an ecologically-engaged creative practice.

Multispecies ethnography provides a method for ‘practising’ alternative ways of thinking and relating by expanding the remit of research into disregarded areas of biological life. As a fieldwork methodology, it encourages immersion in lifeworlds beyond human understanding to stimulate creative reinterpretations of environmental relations, repositioning the endpoint of craft-based practice towards ecological literacy rather than material manipulation.

Four concepts were distilled from reflecting on the critical literature and the lived experience of the fieldwork: *critical anthropomorphism*, *companionship*, *care* and *letting go*. These provided a thematic focus for the creative practice.

Critical anthropomorphism extends imagination into more-than-human lifeworlds, while reminding us clearly of the limits of this approach, and therefore of our own limited sensory apparatus, and consequent partial experience of the world. The piece *Towards Light* draws attention to the gulf between species, exposing the limits of empathy and the impossibility of understanding what it is like to ‘be’ a moth. Yet by pointing up the hubris and humour of the attempt, human receptivity to alternative ways of being is broadened (See 6.2).

Companionship sets the goal of the multispecies learning curve: interaction with other species develops understanding through a focus on our mutual requirements for flourishing. An awareness of the relationship between organism and environment (Bateson) activated through seasonal fieldwork implicates the researcher in acts of damage and care. Involvement in unexpected activities (rearing caterpillars in *Nourishment*) and moments of unintentional violence (*Species Stories*) positions the researcher within their own narrative alongside their more-than-human co-subjects and neighbours.

Personal immersion in ecological fieldwork further develops a transformative ethics of *care* for the more-than-human assemblage in which we live (Chatzidakis et al. 2020). The light trap apparatus illuminates the need to pay attention to these urgencies, however small or insignificant, to develop more sensitive coexistence. Confronting the consequences of interference prompts the development of

remediating practices of care. Echoing the five stages of grief that I applied previously to the development of artistic responses to human-generated environmental degradation, learning to care begins in curiosity and ignorance, moves through impatience and failure, to an acceptance of the limits of personal control, and a sensitivity to the potential for damage. These stages of ecological awareness provide a useful framework for the practitioner developing a practice that decentres the human within conceptions of ‘nature.’

Finally, the concept of *letting go* initially interrogated motivations for object-making in creative practice, challenging the ecologically-engaged practitioner to critically re-evaluate their practice, question the inspiration/production paradigm and transform hierarchies of knowledge. Multispecies fieldwork can redirect creative energy into ecological literacy and conservation activities for their own sake, unlearning patterns of behaviour that equate success with constant production. Satisfaction can be gained from participating in habitat renewal activities, for example, on however small a scale, and contributing to knowledge-sharing activities, through public events, talks, workshops and bioblitzes (described in 5.2.2 fieldwork). Therefore, while expanding modes of practice, fieldwork also highlights the limitations of creative expression, leading to deeper involvement in activist practices of conservation and advocacy for biodiversity.

Caring for caterpillars repeatedly raised the need to refrain from the desire to interfere. From a conservation perspective, one conclusion I draw from my experience as a citizen-scientist is the importance of minimising the ecological impact of humans through habitat restoration and selective rewilding. Multispecies survival involves the provision of some safe spaces, aligned with conversations about rewilding. Landscape-scale restoration activities are required before humans can withdraw from areas of land to boost biological recovery.

7.2.2 Practitioner review

A survey of ecologically-engaged artists found the following approaches relevant to placing human relationships with nature into fresh perspective (Aim Two). Elegiac and nostalgic works, common from the mid-twentieth century onwards but still in

use today (Bowers), are incompatible with a decentred ecologically-engaged practice, because they circle back to a human-centric view. Data-driven works have the potential to engage publics with the political aspects of climate emergency through compelling imagery (Manifest Data Lab). However, the tension between an overly didactic approach (Imani Brown) and fetishising the visual presentation (Weinberg) risks turning the works into aesthetic objects for consumption, undermining the ecological intent. More successful works layer a range of tangential approaches to subject matter through diverse media that synthesise clear conceptual arguments and offer a range of entry points to activism (Matt Parker, *Cooking Sections*).

Multispecies practitioners that focus directly on encounters with the more-than-human are central to this enquiry. Useful frameworks for consideration include the deliberate use of the tropes of natural history collecting from previous centuries (Holden, Dion) to highlight how cultural attitudes change over time, and question hierarchical paradigms that cannot recognise more-than-human agency as equal with humans. Performative artworks often include severe endurance tests for the artists, usefully highlighting the limits of the human sensory apparatus. Such applications of anthropomorphism fall into two categories: those that are trying to 'become' the more-than-human perhaps risk alienating the audience through their extremity and reinstate a focus on the human body (Thwaites, Whall). Those employing a more critical approach (Yondonjamts, *Feral Practice*) remain aware of the distance between lifeworlds, and use it to probe for deeper connections across difference. Performances emphasising the humour in attempts to span interspecies understandings are perhaps more effective (Ashton, Morgan, Coates). Coates uses both strategies at different times, demonstrating a deep and ongoing commitment to decentring the human within his practice.

Artists who engage with the moth as a subject tend to highlight their fragility and vulnerability, expressing human (Brakhage) and more-than-human suffering exquisitely (Gillespie). I prefer to invert ideas of powerlessness and give room to under-explored themes of independent strength, interspecies connectivity and freedom of movement from the moths' point of view. Imlach's concept of extending politeness to encounters with moths resonates strongly because it

recognises the human participants as complicit within the artwork, essential for a practice that decentres the human.

Traditionally, craft practice has been over-reliant on the presentation of skillfully worked organic materials as a proxy for communicating benevolent allyship with nature. A shift away from an exclusive focus on material manipulation can make room for more development of conceptual rigour within craft. Conversely, a more explicit acknowledgement of suppressed craft values and labour within fine art can break down the unhelpful distinction between art and craft, towards 'the great convergence' signalled by Adamson (2017, discussed in 4.3 Craft).

7.2.3 Methods

A critical evaluation of citizen-science moth-recording as a research method for creative practice demonstrated that durational fieldwork produces understandings grounded in bodily experience that act as a springboard for imaginative enquiry (Objective One).

The light trap apparatus allows the recorder to get to know more-than-human organisms by their habits, seasons and movements, instead of by appearance alone. Associations between plants, soil types and species add layers of knowledge beyond 'identification', within the context of a specific landscape. Perception of seasonal changes, moon phases, cloud cover, wind direction and weather are inhibited by urban living, with damaging consequences for health. Tacit, phenomenological awareness of environmental conditions promotes a decentred human perspective, extending to a more conscious awareness of the alternative sensory apparatus of different life forms.

Finally, the durational aspect of moth-recording over seasons and years highlights the complexity, and speed of environmental change. Patterns of flourishing, decline and dispersal in moth populations over time reveal the wider fragmentation and unravelling of systems that support all biological life on Earth. Bearing witness to the impacts of human activity at different scales, not all of which are negative, is built on observation of, and appreciation for, niche specificity and differences in the more-than-human at the micro level.

The light trap apparatus therefore encourages richer ways of recognising and relating to other species, and facilitates an embodied sensory attunement to their requirements for flourishing. In addition, the understandings gained offer themes for deeper exploration within creative practice. Therefore a multispecies sensibility can be defined as sensorily engaged with the environment, committed to developing a place-based ecological literacy through ethical encounters with the more-than-human, and willingness to balance empathy with a critical awareness of the dangers of anthropomorphic projection.

Diversity is a biological imperative and innate genetic driver of evolution. Valuable in itself, biological diversity creates richness through variety, and is the locus wherein responsiveness to environmental change takes place. The engine that drives biological diversity is migration. The creation of abundance (range and density of living species) impacts the health and resilience of habitats to support all life forms. Ongoing projects by Butterfly Conservation prove that if habitats are restored, populations recover. Involvement in citizen-science fieldwork amplifies the importance of supporting biodiversity through habitat conservation activities, and is a key way to build ecological literacy.

Ecological values can be made visible and practised in two ways. The first is by contesting received cultural values through the subject matter of the artworks to suggest other ways of seeing (*What will Evolve? Towards Light*). Critical anthropomorphism supplies a valuable method for exploring empathy in this regard. The second is through promoting research methods such as multispecies ethnography that may involve community activism in the form of citizen-science. Such environmental activities attach inherent value to concepts of diversity, conservation and resilience-building in their own right. Context-specific stories amplify individual encounters that connect with the more-than-human through empathy and non-violence, providing a groundwork from which others can extrapolate, contrast and interrogate their own experiences.

Human creativity is emblematic of biological diversity at work. The creative process continually trials a range of divergent forms of expression, to suggest other

ways of thinking and interpreting experience. Creative practice can radically expand the conception of what is termed 'data', of what is considered valuable to be collected and analysed through environmental fieldwork. Because practice research develops and shares understandings beyond traditional avenues (Bulley and Şahin 2021) it can share insights across cultural boundaries. While its interdisciplinary nature can appear less than rigorous to those from scientific or social science disciplines (see 5.2.3 Practice as research) this apparent amateurism is a strength, allowing paradigms and thought-structures about nature to be challenged.

For the artist, the rationale for involvement in citizen-science stretches beyond the contribution of data. Fieldwork provides meaning through becoming part of an active community, where conservation activities produce visible results over time. Engaging people directly with their own local 'patch' may counteract the paralysis that can accompany knowledge of ecological destruction. Not having to be a 'professional' to engage in such activities makes access to nature easier, especially for urban dwellers.

Adapting the ethnographic method to a multispecies enquiry provides a framework for identifying narratives and themes within fieldwork (Objective two). By systematising conscious reflection, autoethnography hones writing skills. In so doing, it deepens creative enquiry and diverts it away from preconceived or habitual responses that prioritise the visual. This can be a useful tool for overcoming periods of creative block by suggesting other approaches.

As an adjunct to fieldwork, autoethnography is a useful device to connect scientific and artistic research, challenging the professional boundaries of each in terms of subjective and objective interpretations of data and experience. Bearing witness to the speed of ecological change is a central concern for environmentally-engaged creative practice. Multispecies autoethnography places the emphasis firmly onto the relationship between the researcher and more-than-human companions. This focus foregrounds the ethics and power dynamics of interspecies encounters, while removing the researcher from the centre of the enquiry. It is a crucial method for bringing the situated position of the artist-researcher into the framework of the research itself, making room for more explicit cultural critique. The method is also a powerful means of surfacing submerged, tacit or compartmentalised contexts

that may influence the researcher. Bringing subconscious factors into consideration clarifies and contextualises the subjectivity of the situated researcher, shedding light on the narratives that emerge. Through a recognition of their effect on emotional and cognitive responses, this method broadens the remit of fieldwork research, and deepens the understandings communicated.

Objective Two is addressed through the contributions made by the practice itself, developing themes, narratives and a range of forms of creative expression in response to the fieldwork, discussed in the next section.

7.3 Contributions

The ways in which multispecies fieldwork can inform creative practice to promote a decentred human relationship with nature are presented here as situated contributions to understanding, rather than new knowledge in the sense of discoveries (Ehrenfeld and Hoffman 2013). The term ‘understanding’ emphasises how the contributions emerge from an embodied engagement with the more-than-human via the light trap apparatus, filtered through a framework of companionship and care.

7.3.1 An adaptive methodology

The first contribution to understanding presents an adaptive methodology for craftspeople ‘inspired by nature’. My research journey provides a roadmap towards decentring the human, useful for others to adopt as part of their process, or apply to a specific creative concept. Through extended ecological fieldwork and autoethnographic reflection, the contribution opens a space to reflect on post-anthropocentric and relational philosophies in an expanded practice aimed at communicating a multispecies sensibility.

‘Towards something more liveable... A Moth Journey’ (6.1.1) describes the genesis of this process, which I delineate as a specific set of steps in three parts:

1. Visual attraction – curiosity and delight
2. Close observation – undoing preconceptions

3. Sensory cues – heightened awareness

Stage one builds ecological literacy by paying attention to sensory and phenomenological cues beyond the visual, as you begin observation of the subject matter you are drawn to.

Through close attention

4. Empathy grows
5. Responsibility surface
6. Involvement in community and activism

Stage two prompts wider reflection and foregrounds the practitioner's position within the research. Recognising one's situated role in more-than-human relationships is a necessary step towards developing a decentred position within ecologies more broadly – one of the key aims of this research. Deepened engagement rooted in a specific place may expand the practitioner's remit beyond the studio to engage in collaborative, community and activist work that fundamentally repositions their practice.

The third stage returns to creative practice to reflect on the experience of the multispecies fieldwork. The practitioner re-engages with materials and making, finding new ways to integrate the insights gained. The experience itself may demand the exploration of different media and modes of communication.

Ecological fieldwork, unattached to specific artistic outcomes

7. Slows down and extends the ideation process allowing it to be transformed by multispecies experience. In the key transformation
8. Observation of the natural world becomes a relationship, an altered perspective that prompts
9. new themes, narratives and forms.

There are three central aspects to this method:

1. The situated practitioner

Rather than centralising the artist in the narrative, such a practice places the qualities of intra-action with more-than-humans at the centre of the

enquiry, and directs critical awareness towards relational environmental philosophies. Many craftspeople situate themselves through material connections with place; however, I draw attention to the interactions themselves as subject matter in their own right.

2. Ethics

A situated practice realigns the creative motivations for taking the natural world as subject matter with the realities of the ecological emergency.

Personal involvement activates an interrogation of the ethics of interspecies relationships, shifting the focus from the use of natural forms and materials, to narratives of encounter and responsibility, power and care.

3. Narratives

An expanded practice recognises that not everything can be said through the object. Fetishisation of the art object risks recentring the human and the marketplace at the expense of more-than-human stories. A more explicit use of narrative through the adoption of a variety of media, allows the ethical implications of interspecies encounters to be examined more fully. Creative writing, video and collaboration allow a wider expression of ecological context alongside materials-based practice, challenging the way in which environmental relationships are habitually interpreted.

7.3.2 Themes, forms and narratives

The second contribution to understanding lies in the narratives, themes and forms of the practice outputs themselves (Objective Two). In Candy's definition of practice-based research, contributions to knowledge cannot be separated from the works in which they are embedded (2006).

Challenging anthropocentric values

Within the overarching conceptual framework of *critical anthropomorphism*, *companionship*, *care* and *letting go*, themes of **nourishment**, **difference** and **damage** became central. Each work presents a more-than-human view, usually seen as marginal, as worthy of attention, proving "the potential for visual art to reveal subjugated perspectives" (Leavy 2015, 229). The narratives of *A Moth Journey*,

Nourishment and *Towards Light* combine ecological literacy with empathy to activate social dialogues as a demonstration of Bourriaud's concept of relational aesthetics (1998). In addition, details of specific moth encounters (*Species stories*, Appendix E) foreground the rhythm of their lifecycles through themes of nourishment, procreation and migration or flight, to highlight narratives of abundance, predation and ecological adaptation to change, using short form text.

A Moth Journey develops the theme of *letting go* in a narrative where a designer-maker's habitual thought patterns are deconstructed through the influence of interspecies encounters. The episodic diary form text shows how understandings are gleaned from different vantage points within a specific 'habitat' (the roof, the wetlands, the shopping street, the studio).

The theme of *Nourishment* is self-explanatory. Extending the diary form text with video and performance, the narrative reveals how interfering in wild lives creates responsibility: learning to *care* involves unlearning the desire to control (*letting go*).

Towards Light probes the theme of *companionship*, exploring imaginative projection onto the inscrutable moths, and the limits of empathy (*critical anthropomorphism*). Layered narratives reveal *different sensory apparatus* in parallel lifeworlds amid traces of human ecological *damage*, contained in a story about the limits of the scientific method. The three aspects of this project demonstrate how multispecies fieldwork transformed my practice to encompass video, text, spoken word/performance, collaboration and community engagement.

The textiles work presents notions of bodily *difference* (*Empress of Skye, Holeslack*), seasonality (*The Day Everything was Yellow*), and scarcity and *damage* caused by humans (*Miser's purses, Devoured*). The narratives imagine more-than-human mending of the environment (*Pelt for a Creature that Does Not Yet Exist*), and shed light on specific ecological entanglements in artefacts that act as material records of relationships, such as between moth and plant (*White Plume miser's purse*). Using found and repurposed clothing, and stitching and weaving techniques, the textile works establish a sculptural language for three-dimensional wall pieces and smaller objects that interrogate posthuman material recombinations and the consequences of human overconsumption in a subtle, non-didactic way.

Expanded forms of material practice

The textile work makes visible my process of thinking-through-making to build an expressive material vocabulary. My process contributes the insight that the aesthetic need not always be polished. Fragmentary and allusive qualities in both writing and object-making can communicate atmospheres and feelings strongly (diary form scripts, companion objects), including by revealing wrong turns, abandoned attempts, maquettes and works-in-progress as part of the understandings gained.

Installations that combine found objects and text alongside hand-crafted work are a useful device for shifting the focus away from the object as primary, to place greater emphasis on narrative and context, in order to decentre the human concerns and foreground more-than-human stories (*Lepidopterist's Table*, *Miser's Purse*, *Devoured/Pelt for a Creature that does not yet Exist*).

The diary form provides a bridge between reflection-in-action (Schön 1983) and material processes and an entry into creative writing (*Nourishment*, *A Moth Journey*, *Towards Light*). Fleeting personal reflections can communicate strongly in their own right. As a structure it reflects the fragmentary quality of human interactions with organisms that operate on different temporal scales, highlighting seasonality and layers of memory and non-linear experience.

Contributions made by *A Moth Journey*

In addition to the method outlined in Contribution one above, I present the following evidence of the impact of this text.

In 2021, as a result of reading *A Moth Journey* in *Design and Nature: A Partnership*, the leader of the Southern California Fibershed invited me to contribute an online talk to textile artists, craftspeople, and designers, part of a year long *Slow and Local Clothing Project*. She told me that she had "underlined something in every paragraph" and found my ideas about "redirecting the creative urge," and "community engagement, resilience building and knowledge sharing" resonate strongly with Fibershed's mission to develop regional regenerative textile

production. The ensuing skills exchange helped to build reciprocal links and provide a model for building ecologically-informed creative practice networks.

In a further consequence of the publication, I have been asked to contribute a chapter on the development of Fibreshed in England, from a more-than-human perspective to *Design Terroirs: The Holobiont Practitioner, Livability and Bioregioning* to be published by Springer next year. The invitation proves that interest in more-than-human perspectives within design is growing, and my work finds an audience in the wider community of sustainable design. Reaching one thousand reads on ResearchGate confirmed that my research continues to find an audience.

Together, these examples of impact demonstrate that *A Moth Journey* effectively communicates accessible steps towards materialising a multispecies sensibility to those engaged in design and education.

Towards Light – “What climate beneficial practice looks like”

Claire Shovelton provided the following reflections on how my research and our collaboration has influenced her ongoing working practices (Appendix F. 2).

1. Claire describes how she is integrating the expanded awareness championed by my research focus on “accompanying non-human species” into her professional practice, through conversations with musicians, directors and performers. She describes this as an example of “what climate beneficial practice looks like”. The influence activates a use of language that reflects a decentred ecological perspective that finds resonance in the neurodiverse and marginalised refugee communities that she works with.
2. Claire points out that the essence of our collaborative piece offers companionship to artists facing the challenges of anxiety and disruption caused by the nested economic and environmental challenges of contemporary existence, recognising the need to make works that “help(ing) people process emotions, find clarity and meaning,” and hold a space for psychological recalibration and healing.

3. Specifically, our collaborative method on *Towards Light* allowed us to develop our respective creative media. The contrast between her “non-literal visual narrative” and my spoken text made a reflective space where the audience could integrate the feelings inspired by the work into their imaginative lives.
4. Finally, she identifies how our development of the workshop material for the Fair Isle tour produced “a wonderful Resource Pack for primary school teachers” that had a life beyond *Towards Light*, in CHROMA’s regular work with primary schools in Norfolk.

Claire’s reflection and the CHROMA report on *Towards Light* are in Appendix F, where responses from the community on the impact of our work are included, underlining how they “very much enhanced the children’s curriculum” and “enrich our lives here.”

7.3.3 The citizen-scientist-artist

My third contribution stakes out the ground between three disciplinary fields: environmental humanities, including anthropology and feminist philosophies of care; art and craft practice; and scientific ecology, as a fruitful site for further research. I define the figure of the citizen-scientist-artist as a catalyst who brings together elements from each discipline, challenging professional boundaries to widen their remit and recognise alternative values and ways of being. Science communication has tended to avoid public acknowledgement of emotional, nostalgic, phenomenological and intrinsic valuations of nature because they are not easily quantifiable in objective terms. Scientists themselves admit the limitations of this in addressing public appreciation of the urgencies of the ecological emergency (2.6).

Creative practice can communicate sensory impressions, memories and insights into lived biological connections, to create rich meaningful records of ecological relationships in particular times and places. Creative practice that moves beyond the studio to embrace activist engagement with environmental causes provides a way to communicate valuable understandings from each discipline beyond their hierarchical structures. This is also a stance of resistance to prevailing extractivist

worldviews, and here I draw on the qualities of craft that make it an important barometer for re-evaluation of ways of life, whether they be skills, cultures or habitats, that are passing out of view (4.3).

The research began by interrogating the urge to make objects in an ecological emergency, rooted in questions about the limitations of tacit practices within craft. Craft discourse traditionally frames discussion around materials and processes, leaving the theoretical concepts unspoken and underdeveloped, in the belief that material technique and attention to detail is sufficiently expressive (Hemmings 2017). Yet many craftspeople value an autonomy that sits at the edge of capitalism and growth logic, seeking to communicate an alternative set of values for future co-survival and resilience in cultural terms, through their way of living as much as their products. Practising material and cognitive skills imparts resilience, independence and a greater understanding of the value of labour, as well as the satisfaction of mastering skills (Bryan-Wilson's 'craft as resistance,' 2015).

Therefore, the third contribution of this research demonstrates how established craft values, considered by many craftspeople as part of an ethical approach to being in the world, can be transferred to caring for the details of ecological engagement. This requires the development of different means of expression and a deeper engagement with environmental theory. Craft, in its convergence with art, politics and environment, can become a powerful conduit for channeling debates about communal social values into the public arena.

In summary, this research contributes three valuable methods for promoting multispecies sensitivity through creative practice. The first is a multimodal method that, in decentring the object focus, opens up craft-based approaches to acknowledge the situated practitioner's relationships within ecological assemblages, widening the focus and expressive avenues available to the practitioner. The second presents a range of experimental artworks in different formations, each probing possible themes and forms with which to communicate more-than-human narratives of relationship. Finally, the research challenges the boundaries that have traditionally separated the disciplines of science and art, through the synthesising figure of the citizen-scientist-artist.

7.4 Limitations of the study

The ethical dilemma of decentring

The moths do not consent to, or participate knowingly in, my research. Awareness sensitises me and changes the way I interact with them and the work I do to communicate the quality of our encounters. Can I be an intermediary without speaking ‘for’ them? Is my work still extractive in some sense? I cannot presume to give them a voice – perhaps only to reflect and draw attention to their alternative apparatuses. My subjectivity may be seen by some as a limitation of this research, the personal nature and scale of the interspecies encounters considered difficult to generalise from. However, with Haraway, I reject that argument and adopt a feminist approach that acknowledges the inevitability of partial vision, presenting it as a valuable contribution to ways of seeing, especially considering the marginalised status of my subject matter. Feminist post-anthropocentric thought recognises that there is no all-encompassing vision that can bypass individual points of view, and stresses the need to pay attention to differences.

Ambitious method

Offering a method for expanding ‘creative practice’ might sound too broad an aim, yet I hope I have clarified my concentration on craft-based practitioners who make objects drawing visual inspiration from the natural world. I am not suggesting that such practitioners are unreflective: far from it. Rather, I contribute a critical method for expanding practice that may be valuable for those who find themselves challenged to realign processes and intentions to respond more effectively to changing external paradigms, such as the ongoing ecological emergency.

Practical constraints

The practical constraints on this research were numerous, due to a lack of funding and the need to juggle various income streams with caring responsibilities. However, the resulting fragmentation of time and concentration gave the research an extended period of reflection, highlighting qualities of seasonal and more-than-human timescales that add to its layered quality. The patience required for such an interrupted programme is valuable learning in itself. Sidelining human demands is one of the understandings required to decentre the human in

considerations of nature relationships. The constraints have particularly affected what has been possible in terms of studio practice. The textile work therefore is mostly at prototype stage. Strands to pursue in future include developing the potential in wall-based work at scale (*Pelt for a Creature that does not yet Exist*); resolving concepts for using fast-fashion material residues to communicate post-anthropocentric narratives of future coexistence; and ongoing pursuit of the companion object idea as a means to both record ecological data in textile form, and present more-than-human lifecycles and narratives in detail (*White Plume miser's purse*).

7.5 Perspectives and directions for future research

Into the woods

One insight from my fieldwork concerns the harsh nature of my urban roof as a site for ethical interspecies encounters. While the activity connected me to my local urban ecology, I became extremely conscious of exposing the moths to the dangers of heat, and predation by wasps and birds in such an exposed space. Light trap events carried out in Skye, Eryri and elsewhere had a less exploitative feel, reflected in the relevant abundance and variety of species present. Informed by Hannah Imlach's concept of politeness (4.2), my next step could expand the habitats I engage with, to pursue less invasive methods of encounter and broaden my understanding of ecological context. Lorimer's account of the corncrake census (2.6) points a way forward, where the researcher builds sensory skills by energetic immersion in the ecological context, rather than luring the birds out of it. Extending my fieldwork beyond urban areas more regularly, and acquiring further identification and tracking skills, would enable me to communicate more-than-human perspectives more strongly. Away from the urban environment, interspecies encounters may take place on a more equal footing. Deeper encounters in more-than-human habitats, while the habitats exist, also requires advocating for the preservation of these territories as a vital part of the assemblage which supports all earthly life, and prompts more active involvement with practical conservation and rewilding.

Back in the studio

I have begun to formulate an experimental textile vocabulary as part of this research. Developing this fully was beyond the scope of the research, however the research provides the groundwork to build on for developing future artistic projects through the range of themes, concepts and methods described. Alongside textile artworks, creative writing and collaborative projects this may include site-specific work, residencies and workshops to expand public engagement.

A separate strand emerging over the time period has been the parallels between caring for a terminally-ill person, and involvement in species conservation. In particular, the theme of *nourishment* continues to resonate, as I consider the degeneration of my mother, the professional cook, the nourisher, through the lens of environmental breakdown. Images of atrophied synapses merge with maps of species distribution spreading wider and thinner, failing to connect, as functional ecosystems become fragmented. Questions about toxic environments, time lags, unintended consequences of human consumption patterns and shifting baselines coalesce here, providing material for future writing about cultural values, developing an early prompt: “what truly nourished you?”

In and out of the academy

Finally, the research has taken place within the constructs of higher education, supported by my work as an Associate Lecturer at UAL. A PhD is not an artistic training; the skills it develops involve analysis of theory and method, with the academic text as central to articulating the learnings gained. In order to share the contributions to inform future practice and practitioners, my challenge is to find more ways to apply the theoretical, methodological and practical understandings gained through the research within higher education for the arts, through written chapters and journal articles, but also to integrate it within my lecturing in Cultural Studies. The chapter for *The Holobiont Practitioner* for Springer Nature next year is a start. Beyond academia, building on the example of the CHROMA Ensemble Fair Isle tour, collaborative projects involving multimodal disciplines such as music, performance, text and video provide a fruitful model for future community engagement projects, and a way to further communicate the findings of my ecological research in creative ways.

Charting the shift of focus from the artefact itself, through an examination of material and cultural values, to a sense of making as an inherently mindful activity (Ingold 2013) this research contributes to a growing set of alternative approaches explicitly challenging human conceptions of nature as 'other', that together communicate a multispecies sensibility.

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Appendices

Appendix A – Glossary of key terms

Autoethnography – a qualitative research method informed by reflection on the personal experience of the researcher in context.

Biophilia – the feeling of being drawn to other forms of life, and feeling happier when among them (Wilson 1984).

Citizen-science – the participation of the public in the collection of data for scientific research. This may both expand the capacity of science for information gathering and enable the wider understanding of the findings.

Companion Object – a material artefact that suggests relationship with a more-than-human consciousness.

Critical anthropomorphism – the deliberate projection of human sensibilities onto the ‘more-than-human’ to enable the questioning of human identity constructs and investigate alternative dialogues with ‘nature’ (Burghardt, 1985).

Decentring the human – the concept of thinking of humans as only one part of a complex ecological assemblage, which is not based around their needs primarily.

Ecological literacy – an understanding of the principles of biological life, extending to curiosity about the requirements for flourishing of humans and more-than-humans in tandem.

Human/nature relationships – principally, the ways in which Western, capitalist societies and cultures have come to think of ‘nature’.

Lepidoptery – the study of Lepidoptera, the scale-winged insects, derived from *Lepis*, the Greek for scale.

Lifeworld – Jakob von Uexküll’s concept of the *Umwelt* describes the individual ‘perception from within’ of different species, relating to their sensory systems.

More-than-human – biological living matter, principally other species but also extending to organic compounds and systems which are involved in the maintenance of living planetary systems.

Multispecies ethnography – an extension of anthropological ethnography that reconsiders human relationships with other life forms, first named by Kirksey and Helmreich in 2010.

Multispecies sensibility – an extension of the human sense of self to include an awareness of close kinship, and therefore responsibility within relationships with the more-than-human.

Phenology – the study of patterns of change in biological lifecycles in response to environmental and geographic factors such as season, weather, temperature, altitude, latitude

Phototaxis – movement towards light.

Post anthropocentrism – the replacement of human exceptionalism with non-hierarchical, relational ontologies.

Relational ontology – the theory that the primary unit of concern for analysis is not the individual entity but the relationship between different beings, and ways of being.

Situated knowledge – a recognition that understanding is partial, subjective and grounded in particular experiences.

Solastalgia – existential grief in the face of living through environmental degradation and acknowledging what has been lost.

Appendix B – Practice list

A timeline of the development of the practice can be found at the top of Chapter Six.

1. *'Towards... something more liveable' A Moth Journey* (2019) is in Appendix C.
2. [*Nourishment*](#) Video. 6.55 minutes. 12 September 2018
<https://vimeo.com/297749098>
3. [*Towards Light*](#) Video. 10.17 minutes. 2019 – 2021 <https://vimeo.com/591071367>
4. The short text *What will Evolve?* (2017) is Appendix D.
5. Other short pieces of creative writing [*Inchnadamph*](#), [*Woodberry par Soir*](#) can be found on the website, together with transcripts of the video scripts:
www.katherinepogson.com
6. The online Research journal contains the visual multispecies autoethnography data on different species, the [*Caterpillar Care Diaries*](#)
<https://www.katherinepogson.com/journal/2024/2/11/caterpillar-care-diaries-2016-nbsp-2022> and supplementary material:
www.katherinepogson.com/projects

Appendix C – A Moth Journey

‘Towards... something more liveable’ [1] *A Moth Journey*.

It begins with a place. A chalk-hillside, June. While my partner photographs rare native orchids, I start to observe the insects more closely.

It begins with a book. Thousands of colour photographs of living moths (Manley, 2008). Startling, disregarded, numerous – yet in steep decline. Gateway to another world, I still have not tired of this book.

It begins in the studio. A project responding to vessels in The Pitt Rivers Museum archive begins to ‘go all moth’. The textiles connection is obvious, reflected in the common names: Cloaked Carpet, Netted Pug. The structures begin to seep into my practice – yet I know it is not really about form. Colleagues and museum staff alike, react with bemusement, “Don’t they just eat your clothes?” I wonder what I am attempting to work out through this process.

And so, it begins. I begin to take moths personally. I stand up for, and with, moths.

gpm *Hornsey Rise:*

Up the ladder to the roof.

The metal frame stretches up from my first-floor terrace onto a flat roof. I climb over the ledge, past the satellite dish, pulling my bag of cables, wooden slats and plastic jars behind me.

The North London evening sky is overcast, with the orange glow of sodium lights, and intermittent glimpses of moon.

In the act of stepping out onto this platform, I enter a different world. I can see into kitchens and living spaces, crowded together, remnants of a garden, the back yard of the pizza shop.

Immediately I feel the wind, the elevation of the hill, and sense the cardinal points – sunset and sunrise – in a way that I am woefully unable to do at ground level.

Unreeling the electric cable, I cast it off, lowering it through a skylight to a plug in the bedroom below.

A simple plywood box, with two angled sheets of Perspex over the top. The cable attaches to a fluorescent actinic bulb, which gives off an ultra violet glow and should not be looked at directly in case of retinal damage.

Feeling slightly ludicrous in my night-time sunglasses, I wait for the first wave of insects, the dusk flyers.

And here they come.

Their eyes shine copper in the torch light. You feel rather than see their approach, in a whirring set of wing beats, a percussive sensation on the ears.

Fragility is not the impression you receive, surrounded by dense, circling bodies, as the evening deepens. It is more a sense of urgency, of force of intent – as the moths home in, repeatedly diving towards the light.

6.15am Hornsey Rise:

The struts of the ladder are sweaty with dew. The sun is already high enough to warm one side of the box.

And now the urgency is on my side. A cascade of diverse creatures, mostly inert, cling to the sides of the structure. A pale green geometer, wing-tips touched with crimson, escapes before I can photograph it. A huge Hawkmoth, the shape of a stealth-bomber, allows me to lift her on a piece of paper. She rolls back her grey wings to reveal bright blue eye markings on a flash of pink.

Panicking slightly as the heat rises, I feel a growing sense of responsibility. The roof is devoid of vegetation, exposed, and the vulnerability of these creatures in daylight is clear.

Birds gather, knowingly. An apparently expired moth lies on its back at the bottom of the box. I want to record, shelter and free them as quickly as possible. This short intervention of a few hours begins to feel like a trespass.

6.50am Woodberry Wetlands:

At the nature reserve nearby, I have started a moth recording group. We monitor population levels and distribution, as many species plummet in number. A familiar story. Light pollution, pesticide use and climate change all play their part in a complex picture, but simple loss of habitat is key.

Cycling there through Finsbury Park in the early morning, I see my local patch from a different point of view. Noticing tents among the shrubbery, night workers

asleep on the benches, I gain an impression of my neighbourhood, occupied in waves of time by different shifts of humans.

The reserve is a reed-fringed reservoir, surrounded by high-rise flats. Rounding the corner, the sound of birdsong is instant. The sun blazes through the tops of the reeds. The moth population here is quite different from my home a mile and a half away, and I begin to learn more about the intimate, evolved relationship between geology, water, specific food-plants and particular species. The seasons pulse with native and migrant birds, insects and humans, synchronised to the rhythms of vegetation and weather.

8.30am Blackstock Road:

Down Fast Fashion Alley on the way to work, Arabic sequined gowns swing and Romanian lorries unload. In search of breakfast, I pass a series of food outlets: Lebanese, Uighur, Turkish, Ethiopian, Japanese. Within the almost instant access to global resources of an urban setting, food seems to be the most essential reminder of home.

Musing on my locale in terms of sustenance and supplies, I develop the thought that these synthetic imported textiles might be my most 'local' materials.

It occurs to me that the moths – those highly specialised, invisible creatures often thought of as a devouring plague – are simply being starved out of existence. What if they are famished?

9.45am Studio:

Conversations among ourselves have always had other participants" (Ghosh, 2016).

The objects I make are refusing to be accessories any more. They no longer want to talk to or about the human body so directly. I produce a series of very wrong things as this dialogue plays out.

Relinquishing habitual outcomes, materials and processes, I experiment with textiles in different modes and scales. My new subject matter begins to unfold thematically in terms of nourishment, procreation, shelter - appropriating the Maslow[2] pyramid basic hierarchy of needs for nonhuman ends.

As my focus shifts, I look for collaborators and other outlets – writing, installation, workshops – ways of communicating through an expanded practice, the journey in itself.

Decentring the human has liberated me from the artefact, too in a way.

Conclusion

wayfinding, then, more closely resembles storytelling than map-using (Ingold, 2000)

The narrative of my ‘moth journey’ leads from seeing nature as a resource, through attraction and curiosity, to direct observation, sensory enhancement and learning. This fosters a growing sense of empathy and ecological responsibility, which in turn prompts renewed cultural engagement and material action.

But what does it mean to ‘stand up for, and with, moths’ as a mode of creative practice?

If the problem of the Anthropocene is one of how to be, rather than how to act (Maggs & Robinson, 2016) examining the purpose of design in an age of ecological destruction requires a profound rethinking of what it means to be human itself. One role for design might be to develop practices which question human boundary constructs.

Survival, or “ongoingness,” (Haraway, 2016) entails fostering a sense of ‘self’ which includes intimate ‘kinship’ with nonhuman nature. Inhabiting this more porous sense of being alive, we may begin to experience our actions as a form of ‘self-harm’. Practices such as these may help to dissolve the cognitive rift which seems to paralyse privileged nations from *feeling* sufficiently the negative effects of human actions, which we so efficiently document (Conrad et al., 2006).

This journey embodies two paths: one which leads away from making, and one that returns to it.

The first path requires “*disciplined thinking combined with strategically, profoundly, madly letting go*” (Meadows, 1999). Intriguingly, this implies liberation rather than denial – the forward momentum of moving on from practices which societies have outgrown.

Part of this will entail relinquishing materials and habits which are limiting and harmful. More ecological ways of relating trigger changes in consumption behaviour, political and cultural expression, which are design outputs in themselves, with or without artefacts.

For design, this suggests an uncoupling of the link between established economies of desire and new ideas about value, to redirect the creative urge outward and away from production, towards community engagement, resilience-building and knowledge-sharing.

The second path requires a deeper engagement with materiality.

Design solutions reliant on industrial processes create “simplified ecologies” – a symptom of “life-world disengagement” (Tsing, 2016). Accepting the contradictory, uneven “muddle” of the present, paradoxically releases blockage. For complexity and entanglement suggest richness, biodiversity - hope.

Practice implies habit. My exercises in sensitivity, or ‘attunement’ (Morton, 2018) begin, simply, with what is close by. Engagement with my local ‘place’, its inhabitants and processes, has given me an entry point into a joyous world of layered themes, images, activities and connections.

Aware of the anthropomorphising potential in imagining ‘the moth’s point of view’ I nevertheless find value in this starting point.

I appropriate the textiles vocabulary of repair, care, and human domesticity, to speak about a creature usually associated with damage, nuisance and contamination. This inversion allows me to explore overlooked stories of neglect, destruction and unintended consequences.

Through this approach I attempt to untangle and redirect what is materialised through the act of making, in order to ask the question “what truly nourishes you?”

NOTES

[1] Donna Haraway at AURA conference: “Anthropocene: Arts of Living on a Damaged Planet” Santa Cruz, California, 8-10 May 2014. *Anthropocene, Capitalocene, Chthulucene*. Available at: <https://vimeo.com/97663518> (accessed 18 January 2016)

[2] Maslow, A.H. (1943). “A Theory of Human Motivation” *Psychological Review*. 50 (4) p.370.

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– Katherine Pogson, 'Towards... Something More Liveable,' *A Moth Journey*. in Fletcher, Kate, St Pierre, Louise and Tham, Mathilda, eds. *Design and nature: A Partnership*. Routledge (2019), pp.26-28.

Appendix D – What will Evolve?

A thought-piece about the Anthropocene and the urge to make things, October 2017.

“Help nature bounce back!” exhorts a poster in the toilet at the London Wildlife Trust reserve where I volunteer. This simplistic, rubbery idea provokes a train of thought:

What will evolve in our plastic world? What will adapt, absorb, and grow out of the landfill? In a fundamentally altered geology, the extracted, discarded, ‘single-use’ landscape, through the process of breaking down, ingesting and reclaiming molecules, what qualities will be expressed? Perhaps we are already living this process¹⁵⁰ and it is prosaic rather than apocalyptic? A kind of reverse or Post-Frankenstein’s monster?

Frankenstein is apt here, because much of our embedded thinking about ‘nature’ in the Western tradition is based on the legacy of that Romantic tradition out of which Mary Shelley speaks.¹⁵¹ The Enlightenment began to create a sense of separation between humankind and concepts of ‘nature’ which has come to be problematic in the Anthropocene.

Yet current thinking, in biology (Barad) and philosophical Posthumanism (Haraway) as well as literature (Morton) and the arts – through newly formed disciplines such as the ‘geo-humanities’¹⁵² – increasingly questions the boundaries

¹⁵⁰ “better his astrophysics...than my chemistry, a mess compounded of stench, explosions and small futile mysteries. I thought of another moral, more down to earth and concrete...one must distrust the almost-the-same (sodium is almost the same as potassium, but with sodium nothing would have happened), practically identical, the approximate, the or-even, all surrogates, and all patchwork. The difference can be small, but they can lead to radically different consequences.” Levi, P. (1975). *The Periodic Table*. Turin: Giulio Einaudi Editore.

¹⁵¹ “The Ancient Mariner and Frankenstein are gothic and tacky. The tacky is the anaesthetic (unaesthetic) property of kitsch; glistening, plasticized, inert, tactile, sticky – compelling our awareness of perception...subverting aesthetic propriety. Coleridge respected the tacky; he appreciated the ethic of calling sugar the crystallized blood of slaves. So did Mary Shelley; her monster story undermines the myth of Romantic genius. Both stories are about excessively material stuff, art-matter as pure extension.” Morton, T. (2007). *Ecology without Nature, Rethinking Environmental Aesthetics*. Cambridge, MA: Harvard University Press. P.158

¹⁵² As exemplified by [The Royal Holloway Centre for the Geohumanities](#).

of consciousness, to include not only other life forms, but natural phenomena and constructed objects too.

“Can we help but suspect that all the time that we imagined ourselves to be thinking about inanimate objects, we were ourselves being “thought” by other entities?”¹⁵³

Exploring this inversion through studio practice imagines an evolution where human actions (Levi’s “small futile mysteries”) are no longer dominant. Perhaps insects take on the role of manipulating the ‘fabric’ of the environment. Wax moth caterpillars ‘eat up’ the plastic bags buried in the soil¹⁵⁴, potentially altering their DNA in the process (Frankenmoth?) Spiders spin over the holes where resources have been extracted to exhaustion. The altered chemical composition of the atmosphere affects their habitual practice, recalling Peter Witt’s famous 1948 photographs of the ‘effect of psychoactive drugs on garden spiders.’¹⁵⁵ New forms appear, are worked on. Helen Marten’s 2016 Turner Prize installation¹⁵⁶ resonates here – a world collaged through human makings; some abandoned, some revisited, some nascent.

It is important to resist the reflex to anthropo- (or gyna?)–morphise. Projecting human desires, attributes or habits onto the ‘expanded’ posthuman entity, repeats a pattern of ‘colonisation’ (Demos). The danger of romance lurks – in the sense of the Romantic idea about nature: illusion and wish fulfillment – a pristine ideal which can be ‘accessed’ by meditation or mystic thinking.

¹⁵³ Ghosh, A. (2016). *The Great Derangement Climate Change and the Unthinkable*. Chicago: University of Chicago Press. P.31.

¹⁵⁴ ‘Plastic-eating worms could help wage war on waste’, The Guardian, 24 April 2017. <https://www.theguardian.com/science/2017/apr/24/plastic-munching-worms-could-help-wage-war-on-waste-galleria-mellonella>

¹⁵⁵ Witt, P.N. 1948. Via <https://www.sciencealert.com/spider-on-drugs>

¹⁵⁶ Turner Prize 2016, Tate Britain, Helen Marten. <http://www.tate.org.uk/whats-on/tate-britain/exhibition/turner-prize-2016/turner-prize-2016-about-artists/turner-prize-2016>

The practice is to invert the idea of 'nature as resource' by dissolving the perceived boundary between human and environment. To imagine a landscape made up partly of sense-making, order-restoring activities by some expanded consciousness, partly of unintended consequences – the byproducts of thoughtless consumption.

In pursuing this train of thought I chew over ideas relating to re-calibrating human values related with making and producing things, and ideas about what constitutes a local material or environment in the face of a layered, global, commodified urban place, such as Finsbury Park. These are more fully explored in the section on Craft.

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Appendix E – *Species Stories*

1. Awakening

My **mother**¹⁵⁷ says she can hear the earth rising. “Soughing” she calls it. “Like trees in the wind?”

“No, that is a different sound.” “What does it sound like?” “Difficult to describe”. We tell her it is the surge of her own blood, pumping in the thinning veins of her ears. She says no. There – can you hear that? A sort of swelling; the Earth.

This is not a metaphor. Her illness makes her sensory perception distorted, but particular.

On the roof, a **magpie**¹⁵⁸ carefully prises out the rubber seal from between the joints of a metal parapet, and removes the strip of lead from beneath. An opening ceremony.

The traffic is constant but at 4 o’clock in the morning the birds do hold this place. I am in a crucible, delineated by redundant chimneys, television aerials and scaffolding poles, broken only by the upturned bowls of a few remnant trees. A flat square of asphalt at upper window height for the Victorian terraces around, this platform is exposed; an arena, a stage for something.

From their separate vantage points in the scattered canopy, bird calls ripple out, building a cage of noise in the air. Darkness creates a synaesthesia where sound becomes space. A sonic architecture, tasted between the temples. The signals (from left and right) act more like sonar than call and response, not marking out the boundaries of territories, but probing from the centres of fragmented strongholds, bumping together where they encounter resistance.

¹⁵⁷ *Homo sapiens*

¹⁵⁸ *Pica pica*

Overhead a solitary gull¹⁵⁹ floats silently, paler than the sky. The only other living thing I see.

Walking in the half-light is a surprise – I find it hard to balance. My feet constantly recalibrate themselves as if on a tightrope. This twitching reminds me of the endless readjustment of my mother’s Parkinson’s legs. Her unruly knees. Her unsureness of the ground.

Trying to stand planted, I imagine the chalk bowl of London beneath me, two floors down, through the joists and cavities of the building. This flat roof marks the footprint of a small converted garment factory, built in the 1970s. Before that, a Mews for working horses,¹⁶⁰ dragging goods along the Hollow Way to the market at Nag’s Head. The back wall of my bedroom on the ground floor is the only remnant of that stable; together with the drains.

Water will seep laterally into crevices, blooming later in unaccountable places. Ants¹⁶¹ will drown in the air pockets between walls where they have built their vertical empire.

What can you remember when you don’t even know what you have lost? If there is a pattern to this necrosis, it does not follow a logic that can be mapped. In these moments of pause, the question arises: is it enough to keep living in the fuzzy present, only half aware of the things that are missing? How would it be to embrace this dissolution more knowingly?

The river Thames was once thicketed by dense Yew¹⁶² forest up to its banks; the remains, silted stumps, can still be seen at Erith at low tide.

Just as I am concentrating on locating the birdsong, the white gull returns. It circles over my head, wheeling and calling, a raking cry. It is joined by two more, and as

¹⁵⁹ Seabirds in the *Larus* species

¹⁶⁰ *Equus caballus*

¹⁶¹ Insects in the *Formica* species

¹⁶² *Taxus baccata*

the sky pales, I can see they are **black-backed gulls**,¹⁶³ far from the sea. And they see me. There are seven, then eleven, then twelve.

I sit still, the songs of birds I do not know the names of drowned out by gulls and **crows**¹⁶⁴ and **pigeons**.¹⁶⁵ The white shapes over my head continue to dip and circle, wanting something from me.

Themes: attunement to place, more-than-human time.

2. Letting go

August

'Kitten-face' is lying doggo. Hanging, actually. The caterpillar is suspended from the corkscrew **Hazel**¹⁶⁶ on an invisible thread. Rotating gently, rigid. The tree is lively with ants, patrolling their aphid flocks. Is it on its way to pupate? Nothing happens for a long time, so I go inside to cook supper.

The 'gay twig' is a contorted ball of foliage only a couple of feet tall, dangling long catkins in February and covered in giant **scale insects**¹⁶⁷ that I no longer try to wipe away. My partner had it before we met, lodging it with friends from time to time between moves. Named after a passing floral fad decades ago, layers of communal memories are accreted in this shrub.

Clipping it on a hot July day ten days ago, I experienced a sudden, dizzying zoom to close-up. An odd **cat**¹⁶⁸-like face with two large ears sticking up came into focus between the blades of my shears. The twig I was about to snip was a caterpillar, standing stiffly out at an angle from the branch, perfectly mimicking the surroundings. No sign of any other brood, or even of telltale feeding. I absorbed a spike of adrenaline at the violence avoided.

¹⁶³ *Larus marinus*

¹⁶⁴ *Corvus corone*

¹⁶⁵ *Columba livia domestica*

¹⁶⁶ *Corylus avellana* 'Contorta'

¹⁶⁷ *Parthenolecanium corni*

¹⁶⁸ *Felis catus*

Twitter helped me to identify this feline as a larva of the **Peppered moth**.¹⁶⁹ The caterpillar has a skin capable of sensing and attuning to the exact colours of the bark it sits on. The adult displays a wide silky body between parted wings, dusted all over with specks of black on white. Thus they create the illusion of **silver birch**¹⁷⁰ bark, to which the Latin name *betularia* refers. Famed for blackening¹⁷¹ (along with cities and people's lungs) during the rise of industrialisation, this gorgeous moth, despite its chameleonic talents, is one of those experiencing a sharp decline in abundance,¹⁷² even while spreading more widely.

But the blackening of the Peppered moth has nothing to do with humans. Many moths exhibit local forms – variations in colour, which often relate to specific geologies. In Great Britain, northern forms are often darker. A chance mutation early in the nineteenth century happened to coincide with the rise of the pollution which covered trees in soot in the countryside around Manchester. Biologist Menno Schilthuizen¹⁷³ points out that human changes to the environment merely accelerated the evolutionary process; once the mutation existed, its colouring gave it an advantage of concealment over its paler brethren, encoded in its DNA. Selection by predation did the rest. In post-industrial Britain, the process has reversed; all the specimens I have seen are of the predominantly white variety.

Is it here because of my activities? Pondering when the egg might have been laid, I looked for potential parents in my light-trap records. There was a male on 8th June and a possible female on 5th July. It is mostly the males that come to light, apparently.

.....

When I come back from the kitchen, the caterpillar is down in the earth of the pot, being attacked by numerous ants. **Black garden ants**.¹⁷⁴ one of the earliest residents

¹⁶⁹ *Biston betularia*

¹⁷⁰ *Betula pendula*

¹⁷¹ Industrial melanism.

¹⁷² A reduction of 78% between 1970 – 2016 (Randle et al. 2019).

¹⁷³ Menno Schilthuizen. 2018. *Darwin Comes to Town: How the Urban Jungle Drives Evolution*. Hachette.

¹⁷⁴ *Lasius niger*

to colonise my terrace-come-observatory. They built their nurseries in the coiled chambers of the **whelk shells**¹⁷⁵ I placed round the roots of the potted trees. Apparently, they don't sting, so they must just be biting this caterpillar. Rearing up, it flails manically from side to side, swinging its head like a club. Perhaps it is not on the march to pupate, but only trying to escape the ants? At 40mm it doesn't look fat and ready. My reading suggests Autumn would be the time.

Behind me, three chrysalises of the **Comma butterfly**¹⁷⁶ hang where I have tied them, suspended from sticks, back onto the potted **Wych Elm**¹⁷⁷ on which they hatched. A month ago, I happened to look up from my kitchen table and saw the female visit, hover and return to this plant. I knew what she was doing. Something in her movement was intent, gravid. I found an egg. When the plant dried up in the heatwave, I took the fat spiky larvae with me on holiday to Cornwall, and brought them back as cocoons. The heatwave gave me an excuse to frame my curiosity as care. These and the Peppered moth may have been laid days apart.

I lift the caterpillar on a leaf onto a smaller pot to see if it might burrow into ant free ground. But it circles the rim in classic inchworm fashion. An enormous set of rubbery back legs clamp on to the rim like an oversized trainer. The clumpiness of this false 'foot' fringed with hairs, coupled with the urgency of its elastic movement repulses me. Kitten one end, alien the other. I feel wonder, revulsion, desire, guilt, ignorance and responsibility all at once.

Sensing another portable nursery scenario of jars and leaves and cool-bags (we were going away at the weekend), my partner persuades me to release it in the park across the road. I say goodbye to the selfish dream of watching the ermine-velvet creature emerge. We wander in the dark and leave it among some low **brambles**¹⁷⁸ in an overgrown spot. The chrysalis will overwinter under the ground, and emerge next Spring. But I am not really confident in my choice of place: good ground cover, but on the edge of the park, near the street lights...

¹⁷⁵ *Buccinum undatum*

¹⁷⁶ *Polygonia c-album*

¹⁷⁷ *Ulmus glabra*

¹⁷⁸ *Rubus fruticosus*

Another way station in the neighbourhood for me to contemplate. The bush where I left the Peppered moth.

The first Comma butterfly emerged the next day. The whole life cycle, speeded up by the heat it seems, took only forty seven days.

Themes: Ecological literacy, Care as refraining from selfish acts of control, Letting go

3. Alien

April

I wondered how long this would take to happen. Some leaves on one of our twin **Box tree**¹⁷⁹ seedlings are papery, brown and stuck together – I can see black shiny heads hiding within. Skeletonised hedges abound nearby, no trace of chlorophyll left. These eggs will have been laid last Autumn, hatching unnoticed between pairs of stitched-together leaves on a terrace ignored over winter.

The adult **Box-tree moth**¹⁸⁰ is a precise white triangle, a corner of paper, the borders sprayed black. Mourning stationery updated with a graffiti slant. Magpie energy. (The image of Alexander McQueen's 1999 spray painted dress, beloved of my students, springs to mind). Melanic individuals are relatively common though, where the whole wing is suffused brown-black apart from a tiny crescent moon of white. Not the famous industrial melanisation theory taught to school children about the **Peppered moth**.¹⁸¹ A recessive gene? I think of **brown sheep**¹⁸² in a flock of white and look it up.¹⁸³ Both types give off a violet iridescent sheen. I wrote 'are covered in' at first, but that is not true. Colour in moths is the result of light diffracting through specially shaped wing scales, there is no pigment.

This moth reached the U.K. in 2007, first recorded, as with so many adventitious species, in Kent. Originating in East Asia, it is supposed they were imported on

¹⁷⁹ *Buxus sempervirens*

¹⁸⁰ *Cydalima perspectalis*

¹⁸¹ *Biston betularia*

¹⁸² *Ovis aries*

¹⁸³ <https://www.colouredsheep.org.nz/2021/11/22/genetics-how-do-we-get-coloured-sheep>

planting stocks for garden centres, but could also have arrived on the wing, having passed steadily through Europe in the previous years. I think of my excitement when reading about species being recorded first along the Kent coast, where I often visit (*Clancy's Rustic*,¹⁸⁴ New Romney 2002) or holding on only in the shingle of Dungeness (*Sussex Emerald*¹⁸⁵) where its food plant, *wild carrot*,¹⁸⁶ can be found.

It is often said of prolific, recently arrived species that no predator has yet found them out. Apparently, the even more recently arrived *Asian hornet*¹⁸⁷ will predate *Cydalima* larvae in Europe, but only where present prior to the moths. The black green and yellow spiky caterpillars appear poisonous indeed. A friend squashes them one by one between his fingers, green blood running clear. I cannot bring myself to do this.

I do decide that this foot-high plant is more important than the creatures born on it, even though there is one untouched sapling nearby. I reject an idea borrowed from sustainable fashion, that of the 'sacrifice' article. Orsola De Castro leaves an old cashmere jumper in the corner of her wardrobe as an offering for the *clothes moths*.¹⁸⁸ I applaud the intent, but who would not proliferate from a stronghold given the encouragement of a suitable habitat? A rolled up oriental rug has taught me this. I seal my jumpers in zip-lock bags, and eliminate the blond streaks on sight. They are not an endangered species I tell myself, brushing a dusty smear from a wall.

After carefully pruning the miniature box, pulling the brown clumps of leaves apart to pick out the caterpillars, I sluice the entire plant under the kitchen tap. The amputated twigs and larvae are tied up in the food waste bin, sealing their fate as much as if I had squashed them.

Curiosity and disgust are selective emotions it seems. I am someone who removes *snails*¹⁸⁹ from the middle of busy pavements. My tiny terrace overburdened with

¹⁸⁴ *Caradrina kadenii*

¹⁸⁵ *Thalera fimbrialis*

¹⁸⁶ *Daucus carota*

¹⁸⁷ *Vespa velutina*

¹⁸⁸ *Tinea pellionella*

¹⁸⁹ Molluscs in the Gastropoda class.

ragged pot-bound trees is a triumph of rewilding, a cenote hole of lushness let into the first floor of an ex-industrial building. The governing principle of neglect rather than control has brought a succession of **mosses**,¹⁹⁰ **spiders**,¹⁹¹ and latterly **mushrooms**¹⁹² growing out of a rain-soaked rotten plank. I am deeply attached to the life forms layering up over time on the other side of the glass. Companions at breakfast. Seasonal friends. Family. And now suddenly I am committing murderous topiary?

In the enclosed sphere of my domestic space, I choose to place two moth species in the category of pest because they destroy things I value more than them. The fact that neither are rare is a convenient excuse. I shift to think at species level in order to exterminate individuals, while wincing at my intentional violence. It is a question of scale.

Climb a few hundred metres up the cliff path to stand above the port of Dover and you can easily see France. Someone will say “you can read the time on the clock of the town hall at Calais” every time we visit. No sign of the little boats coming the other way except on television.¹⁹³ We read about the numbers, and recognise the days with suitable weather. Ferries, cruise ships and freight liners glide over the Goodwin Sands. Once part of Doggerland, this now treacherous bank of quicksand, famous for swallowing wrecks for at least a thousand years, was a land bridge for Mesolithic people, until sea levels rose to drown their hunting grounds and cut off their walking route to the island which became Great Britain.

Later, I find the front quarter of a caterpillar, neatly snapped off, on the upper of my slipper. I look closely to see if it is still moving, capable of movement. It is not.

Themes: selective violence, native v. ‘invasive’, hypocrisy, environmental change.

¹⁹⁰ **Species of Bryophytes.**

¹⁹¹ **Species within the order Araneae.**

¹⁹² **One of 99,000 fungus species.**

¹⁹³ As I edit this, four more people drowned today trying to cross the Straits of Dover.

4. Fragmentation

My mother lays a full water glass on its side in her make up bag, zips it up and begins to eat another tissue. Scientific illustrator Cornelia Hesse-Honegger meticulously documents a **soft bug**¹⁹⁴ with a wing part growing out of its eye. Neither of these manifestations are intentional. It is easy to see them as programming errors within a specific body, but they are more juicy than that – they are living processes in constant reaction within their surroundings. Understanding these aberrations involves thinking about environmental relationships, rather than dosing or operating on the individual body only.

A chemical trap, a pheromone lure, is opened in a London cemetery, and within minutes, dozens of large, wasp-like insects with transparent wings and yellow-banded bodies appear. Not hornets. These are **Raspberry Clearwing**¹⁹⁵ moths. They were there all along.

(If only JH Fabre had had pheromone lures! The French ‘father of entomology’ cut off the antennae of male **Giant Peacock**¹⁹⁶ moths in his quest to discover the mechanism of their attraction to the ‘virgin queen’.¹⁹⁷)

A painter taking part in a Parkinson’s drug test experiences a period of rich activity. “It came back” he said. He is on the placebo, but the suggestion that his brain might remember, the hope, was enough of a stimulus to produce a rich new spurt of dopamine.

Tiny iridescent green **flies**¹⁹⁸ congregate at the window, blowflies from the dead **rat**¹⁹⁹ in the kitchen wall. I picked 36 pupae out of the stained carpet under her chair.

Themes: adjusting to decline, shifting baseline, the consequences of degrading a system.

¹⁹⁴ **Miridae species.**

¹⁹⁵ ***Pennisetia hylaeiformis***

¹⁹⁶ ***Saturnia pyri***

¹⁹⁷ Fabre, Jean-Henri. 1916. *The life of the caterpillar*. Vol. 6. Dodd, Mead.

¹⁹⁸ ***Lucilia Sericata***

¹⁹⁹ ***Rattus norvegicus***

5. Risk

August

Walking down Everton Street, I found an injured **Lime Hawk moth**²⁰⁰ caterpillar underneath a **birch tree**²⁰¹ on the street. It's the time of year you might encounter such wanderers underfoot, like a visitation, searching urgently for a place to transform. Unmistakable, this one, with its violet body and pointed turquoise tail.

There is a compression between the third and fourth body segments, perhaps made by the beak of a **bird**.²⁰² Matter extrudes from the rear, its innards lie drying on the pavement. But still it is trying to march on. I wrap it in a tissue and carry it on in my bosom to the tube station. Futile mother.

Immobile and rubbery, it lingered for three days, shrinking slowly. Of course whatever was lost in that catastrophic squeezing was vital for the conversion to the next stage. I try to imagine what bits of DNA it could possibly have retained (the imaginal discs?) towards the strange soupy change of metamorphosis.

So the Chinese red birch has become a memorial post; a way station on my way to the station.

I grew up on the kind of **Lime-tree**²⁰³ lined London street that this creature is supposed to favour, but never saw a single khaki-camouflaged adult with its scalloped **sycamore-seed**²⁰⁴ wings. The internet tells me they have been steadily moving Northwards for decades, reaching Yorkshire in the 1950s. I like to imagine hordes of marching lilac wrigglers, waving their turquoise horns in formation as they go; but of course, inch by inch, they flew.

²⁰⁰ *Mimas tiliae*

²⁰¹ *Betula albosinensis*, the Chinese Red Birch

²⁰² Species unknown

²⁰³ *Tilia x europaea*

²⁰⁴ *Acer pseudoplatinus*. Known as samara, the winged produce are actually fruits.

Carrying everything required within yourself, it is nevertheless necessary to dissolve completely to fulfil your potential.

Themes: care, change, damage, migration. See figure 5.1.

6. Dorsal tilting

05:45 am. A pink sky and a light breeze. The lead cladding of the parapet is covered in dew. My hand slips as I climb over and I almost step on a **Jersey Tiger**²⁰⁵ flat on its back on the peeling paint of the roof. There are dozens of them. Bodies scattered around the light trap, like slumbering boozers in the aftermath of a party. But more like an explosion. As if something had burst, throwing the clustered moths out and backwards. They lie stuck, wings plastered to the wet surface, some black legs bicycling in the air, some still. What happened? Did a bird swoop down? Is it to do with the angle of flight? (I recently learned that moths are not ‘attracted to light’ but angle their backs to it to navigate by the moon.²⁰⁶)

I offer the corner of a tissue to the first pair of cycling legs, which grasp it. Gently I slide the creature²⁰⁷ out of the wet, leaving a swirl of black and silver wing scales in the water. Its wings are just old skin now, translucent, devoid of colour, of nap.

One by one, I lift more than twenty individual moths, some tiny, and place them right way up on the egg boxes in the trap to dry off.

Themes: guilt, damage, responsibility, care.

7. I got my eye in

July

Sensory sensitivity is inconvenient, especially when navigating urban

²⁰⁵ *Euplagia quadripunctaria*

²⁰⁶ “Dorsal tilting is sufficient to create the seemingly erratic flight paths of insects near lights and is the most plausible model for why flying insects gather at artificial lights.” Fabian et al. 2024.

²⁰⁷ Haraway prefers ‘critter’ to avoid Christian overtones of creationism, but I don’t think those associations are active for most people, and it sounds affected in English. My scientist friend suggests ‘organism’.

environments, where it seems necessary to edit out, shut down responses to certain stimuli, especially in transit. Noises, smells, distracting signs. But I have got my eye in now. I begin to spot moths in – I was going to write unlikely places – but perhaps ignored would be more accurate. (I have adopted this practice of drawing my attention to anthropocentric assumptions when I spot them when writing, as a self-checking device, an application of critical anthropomorphism). A **Riband Wave**²⁰⁸ the colour of old newspaper splayed against the riser step of an exit from an overground platform. **A Least Carpet**²⁰⁹ plastered to the window of a take-away restaurant near Granary Square. I know the size and shape and season of them now. I see them.

Themes: environmental attunement, critical anthropomorphism.

8. Moths and their Haunts

August

I have never seen a **Garden Tiger moth**²¹⁰ in the UK (and only ever once, in an allotment in the south of France). A cold-loving species, they are the woolly bear caterpillars of a nineteen seventies British childhood, seen crawling urgently in spiky fur during the summer months, and have decreased in abundance by 88% since 1970.

The adult moth has rounded wing ends, pendulous red underwings with circles of iridescent indigo and a pompom of velvet brown head fur. The patterns on its brown and white outer wings recall the chequered hide of the **giraffe**.²¹¹

If the disappearing Garden Tiger is all roundness, the day-flying **Jersey Tiger** is angular, vampiric in silhouette, its black outer wings not dappled, but cut with **zebra**²¹² stripes. It is the moth that friends send me pictures of the most, from

²⁰⁸ *Idaea aversata*

²⁰⁹ *Idaea rusticata*

²¹⁰ *Arctia caja*

²¹¹ *Giraffa camelopardalis*

²¹² *Equus quagga*

Borough Market, from office balconies: “What is this?” Jazzy day-flying summer apparition.

British Moths and their Haunts (Newman, 1952) combines enigmatic black and white images of the post-war British countryside with poetic descriptions of where native species hang out. Or used to. The book describes the arrival of the **Jersey Tiger** on the south Coast of Britain as “late in the last century”, at the end of the Victorian era.

The hindwings are nasturtium coloured – tomato red or orange-yellow. (Is **nasturtium**²¹³ a native food plant in the Channel Isles? I must look that up...) In strong flight, the flash of colour reminds me of flamenco dancers, flouncing their coloured skirts. Thus we characterise the exotic, its vitality and allure, its threatening, alien strength. (I later discovered that it has another vernacular name that I had not heard of, the Spanish Flag).

“With its scarlet petticoats...” What a cliché! Are scarlet petticoats still even a living memory? Does the phrase hang on, with faint connotations of street whores and Dickensian musicals, Jack the Ripper, just something we say, unaware of the buried origin story?

It seems that the Jersey Tiger is replacing the Garden in terms of public familiarity. One is disappearing and one has increased in abundance in the UK by almost 600% in the last twenty five years. This is not because the J.T is driving out the Garden, but because warm, wet winters and springs do not suit the woolly bear.

Themes: Difference, migration, species fluctuation, habitat change, ‘the exotic’.

9. Stitching the world back together

October

Early days as a research student. I am giving my first presentation to a group of

²¹³ **Plants in the genus *Tropaeolum***

peers and a few staff. I haven't used Powerpoint for years. It has taken me two days to organise my visuals and collect my textual references: from museum objects via craft making to biodiversity loss. Images of downward spirals of moth populations. How can I link my environmental hobby and my textile practice to speak of nature relationships? There is an awkward silence at the end. Eventually someone says "B-b-but moths... don't they just eat your clothes?" "And our *collections!*" breathes someone from Curation.

I go home and make a slide with two and a half thousand moth images, one for each UK species, snapshotting in to just four tiny squares in one corner – the ones you might find in your wardrobe and your larder. If you don't keep them clean.

.....

June

I bought it partly because it is a family name. Manlove. My mother-in-law's embarrassing middle name at school.

MANLOVE'S THREAD FOR IRISH LACE 200 Yds

S. Manlove and Sons Ltd.

Manchester.

Inside the box are four wooden reels with peeling labels. Each has a tiny hand-written inscription in black ink:

Daisy. for one handkerchief. nov. 6. 1917

Joyce for 1 hcf.

Sylvia. 1. hndkrchf. The writing is different on each, Sylvia has a curly f. – as tiny as the stitches of the crochet chain.

Over a hundred years ago, before the end of the First World War, these ladies were gently trying to stitch the world back together.

Opening the box to include it as part of an installation using found textiles, I find the amber shellac residue of a tiny exuded chrysalis sticking out of one of the reels. The chrysalis is on Joyce, who had completed over a foot of handworked edging.

This careful work is insect-like. Patient, repetitive, rhythmic, thorough. Each chain a base in which something can be built.

Packing away, I find the body of the **moth**,²¹⁴ long, gold, dusty, there all along – never escaped from the box.

.....

September

The fashion professor's husband is showing me around the garden, tomatoes in the greenhouse, progress in the vegetable beds, the wildflower patch. All the while I am distracted by a dangling case-bearer, ***Tinea pellionella***,²¹⁵ bred between the ridges of his knitted beanie hat, revolving gently on a thread behind his left ear.

Themes: anthropocentrism, nuisance, care and repair, living with the more-than-human.

10. White Holes

June

Above the constant trundle of lorries from Bulgaria and Poland people in billowing saris and white trainers photograph themselves on the cliffs over the port. Their phones intermittently welcome them to France.

On the clifftop you can find **Five-spot Burnet moths**,²¹⁶ **peregrine falcons**²¹⁷ and the conical spikes of **pyramidal orchids**.²¹⁸ Once I saw a rare **Dark Green Fritillary**²¹⁹ butterfly as I climbed down the steep ladder nailed into the chalk to the wreck below.

The fields near St. Margaret's Bay have become **vineyards**.²²⁰ Champagne country.

²¹⁴ *Tineola bisselliella*, the common clothes moth

²¹⁵ The other type of clothes moth

²¹⁶ *Zygaena trifolii*

²¹⁷ *Falco peregrinus*

²¹⁸ *Anacamptis pyramidalis*

²¹⁹ *Speyeria aglaja*. A GB Red List Near Threatened species (2022).

²²⁰ *Vitis vinifera*

Beyond the traffic which funnels through Dover ignoring the town, the chalk valleys are surprisingly close. In a quarter of an hour you can be up on Lydden Down, among the flowers of the chalk. *Sheeps' Fescue*²²¹, *Bird's foot Trefoil*,²²² *Horseshoe Vetch*.²²³ The close-cropped, hoof rutted slopes feed colonies of blue butterflies, such as the nationally vulnerable *Chalkhill Blue*.²²⁴ This species has developed a symbiotic relationship with *yellow meadow ants*,²²⁵ who hide the chrysalis in their chambers to pupate, and feed on the honeydew it secretes in return. *Adonis blue*²²⁶ caterpillars are tended in turn by *red ants*²²⁷ who, it is thought, bury them at night in small groups, to keep them warm and away from predators.

.....

Dover is the opposite to the White Holes of Skye, places where no moth species have yet been recorded. Kent has the most species of rare moths in the UK, and many new records of visiting species are recorded here, as the winds of the continent assist their passage. The map of arrivals in the Atlas²²⁸ is so tantalising – all those dots along the coast. 'Suspected migrant' it often says.

I have not yet seen the boats.

In my cousin's garden I am indulged in running a moth trap. The family is bemused; the middle son intrigued. The haul is impressive. We identify 26 species including the strange trapezoid log that is the *Wax moth*,²²⁹ which lives inside beehives and is adapting to digest plastic bags. But the highlight for me is a strange, small splinter of a micro-moth with a bright pink streak down the side of its body, and a comically huge yellow-green eye. *Oncocera Semirubella*²³⁰ is nationally scarce, and only to be found near limestone cliffs where the trefoil and

²²¹ *Festuca ovina*

²²² *Lotus corniculatus*

²²³ *Hippocrepis comosa*

²²⁴ *Polyommatus coridon*. A GB Red List Vulnerable species (2022) whose sole foodplant is Horseshoe Vetch. Distribution has decreased by 82% since 1978.

²²⁵ *Lasius flavus*

²²⁶ *Polyommatus bellargus*

²²⁷ *Myrmica sabuleti*

²²⁸ *Atlas of Britain and Ireland's larger Moths* (Randle et al. 2019).

²²⁹ *Galleria melonella*

²³⁰ The 'rosy striped knot horn' – who makes these vernacular names up?

white clover²³¹ grow. Another example of the genius locus of this place. Mineral, microbe, plant, moth, bird, human.

Border Force. They can't really talk about what they do. Vague comments about convoluted data protocols and impossible information targets. (How do you set goals for what you have not yet found? Line up here if you are carrying drugs, over here if it's skinny brown adolescents). I want to know, but cannot ask what they feel about the wrinkled rubber dinghies, sloughed off like old skin on the shore. Eclosed,²³² emerged, imago. Made it.

Aycliffe. The council estate on the edge of the town, where the migrants are said to head for, climbing up a steep path from Shakespeare beach. Really though, they head for the much wider beaches of Romney marsh and the Aycliffe ones are more likely to have jumped from a lorry and found themselves in a cul-de-sac.²³³

Migration – the lure of a better future, some unfamiliar place where opportunities will be... more. And the trials along the way will be worth it, downpayments on this nebulous future. A reward earned. Sometimes the gamble pays off. But sometimes it is a dangerous illusion. Deprivation is what it is, disruption. The permanent unease of transplantation. There is no welcome, no safety on the other side. Just different kinds of suffering.

But migration is the engine of evolution; you have to think of it in generational terms: plant the seed, form a bridge head, a place for future generations to build from. As the moths do: fly a little further, squeeze another brood in, try again. Eventually, one might stick. In that sense, I am a survivor of the Irish potato²³⁴ famines.

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²³¹ *Trifolium repens*

²³² Emerged (of an insect) from an egg or pupal case. Cambridge English Dictionary.

²³³ "‘Frustrated’ Dover residents catch 40 migrants running around estate and hiding in bushes after Channel crossing"

<https://www.lbc.co.uk/news/dover-residents-40-migrants-aycliffe-estate/> 31 October 2022.

²³⁴ *Solanum tuberosum*

My cousin has moved house. He suggests I try out my moth-trap in his new proudly refurbished garden. I eye the tumbling, fecund railway bank beyond, but demur. The garden is a sterile wasteland; mature trees and neglected shrubs ripped out and replaced by new turf, patio slabs and a single, forlorn *water lily*²³⁵ in the pond.

A skeletal brown man with no shoes is asleep in the bus shelter opposite the house.

Back in London a few days later I identify a small yellow micro-moth on the roof of my house. I thought *Bisigna procerella*²³⁶ would be too rare to have a vernacular name, but someone has called it the Kent Tubic. I send a photo to the County Recorder for confirmation, and the list-tickers kick in. “This is a first for Hackney!” (I live in Islington).

My record is entered in the Entomologist's Gazette. The County Recorder sends me the official log which states “first recorded in 1976 at Ham Street in East Kent ...” I write back to say that I had just driven back from Dover and perhaps the moth could have been transported with me somehow, clinging on to the side of the car? Nobody replies to this suggestion.

Themes: contrasting attitudes to migration, abundance, ecological knowledge of place

²³⁵ *Nymphaea alba*

²³⁶ The ‘Kent Tubic’

Appendix F – Additional material



1. Global Fashion Conference 2018 proposal

Abstract Submission Form GFC2018, Centre for Sustainable Fashion, London College of Fashion, University of the Arts London

WORKSHOP Interactive session: 30-minute workshop.

Conference theme: Nature. Fashion, art and the environment.

Title: Companionship with Nature – a material dialogue.

Abstract Outline:

The notion of a divide between humanity and the rest of 'nature' can be seen as a root cause of environmental degradation, bio abundance loss and extinction.

Informed by contemporary ecological philosophy which questions human boundary constructs, this workshop seeks to test two speculative practices for reactivating engagement with the natural world, developed as part of my PhD research in the Centre for Sustainable Fashion.

One path embraces "profoundly, madly letting go" (Meadows). The 'moth journey' traces the steps of an alternative creative process: from 'nature as resource', to ecological "solidarity" with the nonhuman (Morton).

The second forges a renewed engagement with materials and making. It attempts to "stay with the trouble" (Haraway) and materialise an 'other-than-human' perspective.

I invert the textile vocabulary of repair to speak of creatures usually associated with nuisance and damage, in order to explore the consequences of human destruction and neglect.

Aims

- 1 Discuss the two approaches, and record responses.
- 2 Test different communication methods (tactile, visual, discursive) to gain feedback and develop the methodology. (Pilot studies take place in July).
- 3 Identify participants interested in further collaboration and conversation.

Objectives

- 1 Show 5-minute 'moth journey' video introducing "letting go" theme and context for the practice.
- 2 Guided discussion.
- 3 Summary of responses.

References:

Meadows, H. D. (1999) *Leverage Points: Places to Intervene in a System*, Hartland, VT: The Sustainability Institute.

Morton, T. (2018) *Being Ecological*. Penguin Books, London.

Haraway, D.J. (2016) *Staying with the Trouble: Making Kin in the Chthulucene*. Duke University Press, Durham.

Keywords (up to 5 words): dialogue, nonhuman, eco-logic, practice, methodology.

All Proposals are submitted to Blind Peer Review and therefore they must be sent in Word Format, in order to allow for the identification of Authors to be removed and kept in a separate file.

2. Reflection by Claire Shovelton on *Towards Light*

TOWARDS LIGHT

A COLLABORATION WITH KATHERINE POGSON

REFLECTION BY CLAIRE SHOVELTON 31 March 2025

In 2019 Katherine and I started a conversation about collaborating on a film. Katherine was inspired by a classical chamber concert where my visuals were projected onto a linen screen – it reminded her of a moth trap.

Katherine's research into accompanying non-human species and the implications of this was thought-provoking for me - I learnt so much from every conversation we had, and each conversation led to more between myself and other theatre/music practitioners, some of whom were at that point involved in Theatre Green Book, No Music on A Dead Planet etc

Katherine's research and her perspective on what she was finding inspired me to contemplate what climate beneficial practice looks like and how we accompany every living thing - which also opened up new ways to inform the human experience, and then integrate this into my professional practice (I work in the performing arts as a Producer, Consultant and Mentor).

Much of this seems to rest on opening up connection and giving value to what exists beyond "us", an appropriate endeavour given how individual-centric our society is now. For example moths offered musings on fragility, transience and transformation. I contemplated how our relationship with non-human species can mediate for us, between instinct and intellect, between our inner life and everything that is without. Find the connections, find the balance.

All of this expanded my language, enhancing the work I do with creators and performing artists – both in making work, and in developing emerging artists.

Katherine's research pointed me to useful sources – such as Paul Saffo, outlining how we are now in the Creative Economy where the new scarcity is of Meaning. This provoked the thought that if artists are engaging with the challenges we face now in ways that resonate, helping people process emotions, find clarity and meaning, gems of creatively-informed research such as Katherine's are so helpful for those of us holding space for artists.

The provocations in the material – what truly nourishes you?; the idea of freedom of movement, etc – these spoke to so much that we are grappling with today. One

of my roles is as development consultant for the Citizens of the World – a choir for refugees and their allies. The community includes people from 30+ nations- where the impact of climate change on displacement and the need for freedom of movement are sharply in relief.

For the Towards Light film I started researching moths, and quickly felt a little overwhelmed at the enormity of the subject. But then I found images and research revealing how amazing moth's eyes are - I decided then to make the visuals from a "moths-eye" point of view. This gave me freedom to be abstract and expressionistic – I worked with the light bouncing off water, silks fluttering in the breeze, a hexagonal prism. I think this non-literal visual narrative may have allowed the people watching to engage more with Katherine's words, and more deeply with their own responses to those. As part of my practice I aim to encourage people to engage with their inner, imaginative lives – too much is thrust into people from external sources now, and it feels like people need help to care for their inner wellspring so conviction and ideas can flow from the inside to the outside rather than the other way about.

After exhibiting Towards Light in Bethnal Green we took it as stimulus for our 2021 project in the UK's most remote inhabited island, Fair Isle (blog: <https://www.chromaensemble.co.uk/fair-isle-towards-light-2021>), out of which came a wonderful Resource Pack for primary school teachers - and the core material for a project with 7 Primary Schools in Norfolk.

I made a Towards Light book as I worked on the project – it is full of references, ideas, sketches, paintings, materials. I still refer to it from time to time. What I learnt from Katherine and her research set me off on trajectories that are still offering benefit to me and those I work with – a selection of which are listed here <https://www.clareshovelton.uk/projects>

3. CHROMA Ensemble – Report on *Towards Light*

TOWARDS LIGHT 2021-2022 REPORT FAIR ISLE 23 September – 1 October 2021

In collaboration with the School, Fair Isle moth recorders Nick Riddiford and [REDACTED] and the community of Fair Isle – a range of workshops responding to the island's moth population, and a concert.

Music: **Stuart King** (clarinet, artistic director of CHROMA)
[REDACTED] (violin) [REDACTED] (cello)
Textiles: **Katherine Pogson**
(writing PhD in the Sustainable Fashion Centre, LCF, lepidopterist, textile designer/maker)
Visuals: **Claire Shovelton** (producer CHROMA, photographer, visuals artist)

"We were so happy to have the wonderful Chroma return to Fair Isle this autumn. Each and every member of the group brings so much to Fair Isle - of course beautiful music, but also fun and engaging creative workshops for all ages - something quite special when we live in the UK's most remote island community. The Fair Isle children get an incredible introduction to classical music and the joy it brings. Chroma is not just a group of visiting artists; they have become true friends of the community and they enrich our lives here."

[REDACTED], secretary Fair Isle Development Company

"thank you so much for the great work you did with school children. The processes worked through, skills practiced and knowledge shared along with so much creativity has very much enhanced the children's curriculum this term and beyond"

[REDACTED] Head Teacher, Fair Isle School

(This project was postponed from August 2020, due to Covid-19.)

Fair Isle is the UK's most remote inhabited island, and its isolation was only exacerbated during the pandemic. This project brought convivial, invigorating, life-enhancing and educational activities after this period without the isle's usual visitors and social activity. The community helped prepare this project, and welcomed us and all the activities with a great enthusiasm. This was CHROMA's 8th visit to Fair Isle, in a relationship going back 19 years to 2002. There is a great value in these relationships built over time. It is also a special thing to see children grow from previous visits.

For the CHROMA freelancers the week also gave much-needed creative breathing space, and revitalisation of practice, after a year of lockdowns followed by over-scheduled diaries when the arts opened up in May 2021.

The CHROMA team followed Scottish government guidelines for lateral flow testing to go to Scottish islands, and continued testing whilst in the isle. We based our residency in the Hall where there is lots of space and good airflow.

We provided textiles, art and craft materials and tools for the workshops and left these at the school for the children to use, as in recent years the school has suffered from a lack of funding for creative materials.

Fair Isle population at the time was 50, plus 5 volunteer rangers, 2 artists on residency, the island Nurse's visiting Mum and 1 birder. The project overall welcomed 18 workshop participants, 36% of the population, and an audience of 45 at the concert (which included some of the visitors).

Background: Why Moths? by Katherine Pogson

Moths are a vital part of the interlinked ecological story that keeps life going on planet Earth. They are a vital source of food for birds, bats and other mammals. They are a key night-time pollinator of crops, trees and flowers. More than that, they are beautiful and surprising creatures with fascinating life stories in their own right, having evolved over long eons in close relationship with particular plants, places, and conditions.

Because moths mostly fly at night, many are rarely seen, so their importance is often overlooked and their contribution to ecological life systems underestimated. A [recent study](#) showed that their pollination of a wide variety of crops and wild plants was much greater than previously thought. In essence, everyone had fixated on bees, and not thought to look at the fat furry bodies of the 'night shift'. Moths are fundamentally misunderstood by many. Of the 2,500 U.K. species only 4-5 tiny Tineid moths are responsible for making holes in clothes, or invading kitchen cupboards. The vast majority of moths only eat very specific plants (and only in the caterpillar stage!) and do no damage to humans.

Fair Isle

Global heating has resulted in the movement northwards of many insects as more habitat becomes suitable, and those who require cooler conditions retreat. The fact that Fair Isle has an active community recording biological data at the [Fair Isle Bird Observatory](#) (despite the fire of March 2019) and elsewhere on the island, provides key insights into this phenomenon. This, alongside its longstanding monitoring of migratory and wind-assisted species, shows that "*Fair Isle is on the map - and active - despite most folk thinking we are a mysterious rock in the middle of the North Sea*" (Nick Riddiford, resident and Butterfly Conservation Scotland volunteer).

Creative Work: Moth Stories

What stories can Fair Isle's moths tell to the rest of the world? Can we give them a voice? We imagined the journeys and events from the moth's point of view.

Pick a moth! We focused on a few species stories as narrative backbones. gathering visual starting points:

- Images - wing patterns, geology, maps.
- Colour stories
- Information on food plants, links to other insects, animals, birds, humans.

- Life stories - What does it eat? Does it migrate? How long is it an egg? How many generations?

Creative responses interleaved through the music activities included:

- Textiles: Weaving to form, using texture, colour, shape in response to moth patterns, plants, maps.
- Creative writing: Diaries, observations, storytelling, spoken word piece
- Painting, drawing, collage: e.g. phenology wheels (Circles of seasonal activity visualised)
- Film-making: moths-eye point of view, moth stories

Activity summary:

1 – **Moth discovery session** Led by Katherine and Nick Riddiford

Nick brought his collection of moths (some alive) so we could all inspect them close up.

The children are accustomed to going to look at moth-traps [redacted] and are already citizen-scientists. We felt we might well learn from them, and see a Fair Isle demonstration of how to accompany non-human species in a more respectful way.

2 – **Field notebooks and Phenology Wheels** Led by Katherine

We gave each of the children their own field notebooks, with coloured pencils and paintboxes to fill the pages with their observations. Katherine brought a stack of reference books and each chooses a moth to discover as much as possible about its life cycle. Katherine demonstrated how to create a phenology wheel and the children logged the moth life stages against the relevant months in their wheels.

3 – **Instrument introductions & listening** Led by Stuart

Stuart, [redacted] introduced their instruments in detail. The materials and types of wood used. The histories. The reasons why the instruments are built as they are - a demonstration of sounds and possibilities.

They played some Biber *Sonata Representativa* - asking the children to guess which animals were represented in there. Cue much hilarity but also a high hit rate on accurate guesses!

The children then listened to a couple of movements from the Saariaho piece *Sept Papillons* for cello - followed by an improvisation on the piece, adding violin, clarinet and the children's own chimes, creating an extended ensemble. Their listening skills are extraordinary.

4 – **Weaving to Form** Led by Katherine and Claire

10 participants of all ages (the youngest 9 and the eldest 90 years of age).

Katherine gave a brief introduction to the context for the workshop and explained weaving to form.

Each chose a moth for inspiration and set to hammering their copper nails (copper being kinder to fabric) into their boards ready to set up their warp threads. Once this was done, they started weaving or knotting the weft - using all kinds of scrap fabrics, wools and laces from the stash on the central table.

Several participants finished their pieces after the workshop - we exhibited them in the hall on the concert day.

5 – **Music – dark and light, creating a new piece** Led by Stuart

Stuart explained to the children they will be creating their own piece of music. It picks up on the theme of *Towards Light* and so is a piece moving from dark sounds to light sounds. He asked them to look at moth names and choose names for the dark and names for the light. This later became a spoken word chorus in the finished piece.

After they had written the moth names down with their designation into dark or light in their workbooks, we brought out the school's percussion instruments to improvise with clarinet, violin, cello and percussion within the dark and light moods.

Once again, the children became part of the ensemble, listening and performing as part of a group.

It is impressive how they tuned into each instrument and picked up cues - coming in with appropriate sounds and becoming quiet so someone else can have their moment. Natural chamber musicians, each of them!

6 – **Moth collages** Led by Katherine

We started the session by showing the group *Towards Light* - the 10-minute film by Katherine and Claire.

Then we brought out patterned papers, scissors and glue for a collage session - again, each choosing a moth to render imaginatively into paper collage.

7 – **Developing the children's piece and practice** Led by Stuart

We ran through all the pieces the children were part of, to make sure they were confident in what they were performing in the concert the next day. They were involved in three pieces – their own created piece, a contemporary work and a Renaissance work:

1. their own created piece *Towards the Light*
2. Kaija Saariaho (1952-) 2 movements from *Sept Papillons* with additions from the children
3. Heinrich von Biber (1644-1704) *Sonata Representativa* creating noises for air, sea & land creatures

8 – **Weaving and film-making** Led by Katherine and Claire

The group continued its weaving to form.

During this session Claire worked with the children one at a time at the other end of the Hall, shooting mini-films.

Later Claire edited them together to make a 3-minute film using the music practice from the morning as a soundtrack. (can be watched on the blog [here](#))

9 – **the Fair Isle School Orchestra rehearsal** Led by Stuart

Rehearsal for the concert with the full ensemble - which we dubbed "the Fair Isle School Orchestra".

10 – **Concert**

The concert was performed by CHROMA and the children of Fair Isle Primary School, starting with screenings of *Towards Light* and

the children's short film.

The Fair Isle School Orchestra performed very well, with good listening, playing and timing. The programme included a beautiful version of Dufay's *Ave Maris Stella* with [REDACTED] and Stuart playing from the edges of the room (a couple of the audience commented afterwards how amazing it was to be surrounded by that sound) and another outing for CHROMA's commission from Deborah Pritchard *Rosa Celeste* - an exquisite piece by Deborah written after she was unable to join our 2017 project on the isle for personal reasons. It was fitting to play it for this audience as Fair Isle was very much in her mind when she wrote it.

Web-blog:

The Fair Isle *Towards Light* Blog is at:

www.chromaensemble.co.uk/fair-isle-towards-light-2021

Teacher's Resource Pack

Coming out of the workshops on Fair Isle, and given to teachers in advance of CHROMA's arrival. Contents include:

- Quick span of languages with the words for "moth" and "butterfly" in Irish, Scots Gaelic, Welsh, French, German, Spanish, Arabic, Bengali, Swahili, Yoruba and Zulu.
 - Introductions to the clarinet, bassoon, violin, cello and piano and the wind, brass, string and percussion families.
 - Listening to the instruments – suggested winged-creature listening for each instrument
 - The words for *Twende Tuka* – a Swahili song about butterflies
 - Making a Phenology Wheel
 - Using insect names to create a Spoken Word piece with music underscore
 - Weaving to Form instructions and examples
 - Creating an abstract film inspired by insect stories (storyboard and techniques for filming)
-