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DRAWING THE EXTINCTION CRISIS

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‘Precarious Birds’ is an ongoing collaboration through which the authors ‘stay with the trouble’ of the extinction crisis; engaging in creative practice to process our grief in response to critically endangered and extinct bird species. The project uses birds as an index – markers that point to the ecological, cultural and ethical dimensions of the extinction crisis more broadly. The collaborative aspect of the project involves thinking through deliberately slow processes of drawing, cross-stich and writing, as well as contextualising this creative practice with shared texts and conversations: with each other, as well as ecologists, historians, artists and nature writers. This paper frames the collaboration as an ‘expanded conversation’ and uses the unfolding creative processes in response to two birds – Passenger Pigeon and Laysan Duck — to demonstrate how processes of drawing and tracing open opportunities for us to understand the ‘entangled significance’ of individual species within the extinction crisis, and argue that through documenting and sharing our expanded conversations, processes and artworks, we contribute to cultural ‘archives of loss’, which foster collective cultural memory about precarious bird species.

“Birds are indicator species, serving as acutely sensitive barometers of environmental health, and their mass declines signal that the earth’s biological systems are in trouble.”
John W. Fitzpatrick and Peter P. Marra (2019)

‘Shifting baseline syndrome’ and ‘ecological amnesia’ are terms which describe a shift in the perception of what is normal within a local ecosystem from one generation to the next, due to a lack of “experience, memory and/or knowledge of its past condition.” (Soga & Gaston 2018) A commonly cited example is that, a generation ago, a long car trip would require several stops to clear masses of dead insects from the windshield, but few of today’s children have witnessed this phenomenon. This generational amnesia results in dramatic under-estimation of the extent and seriousness of cascading biodiversity loss. Ecologist and historian Ingrid M. Parker describes the impact shifting baseline syndrome has for conservation and restoration projects:

“Our society’s ecological amnesia is profound, and it limits us for understanding our current and past impacts on the species and ecosystems around us. [...] We are hampered when we set conservation or restoration goals based on our knowledge of recent times alone, without an understanding of the structure and composition of plant and animal communities even a hundred years ago, nor of the practices of the peoples who interacted with the land before European colonization.” (2017: p M161)

This points to the historical and cultural dimensions of the extinction crisis; there is a recognised need to bear witness to and record more than scientific data in relation to biodiversity loss. For example: the emergent interdisciplinary field of Environmental Humanities applies questions of meaning, value and ethics to the environmental challenges of our time (Rose et al. 2012; O’Gorman et al. 2019); large-scale public exhibitions such as Cooper Hewitt’s ‘Nature’ Triennial (2019) and the V&A’s ‘Fashioned from Nature’ (2019) critique the role design plays in anthropogenic environmental degradation; and a proliferation of platforms are archiving art and design projects which respond to the climate crisis and associated extinction crisis, such as Climarte and Carbon Arts.

Sitting within this zone of activity, ‘Precarious Birds’ is an ongoing project through which the authors create narrative-based artworks in response to critically endangered and extinct bird species. The collaborative aspect of the project involves *thinking through* deliberately slow processes of drawing, cross-stitch, collage and writing, as well as contextualising our creative practices with shared texts and conversations: with each other, as well as ecologists, historians, artists and nature writers. Although we produce publicly exhibitable artworks from the project, this paper focuses on our more private collaborative processes, particularly the way drawing and tracing open opportunities for understanding the ‘entangled significance’ (Rose et al. 2017, p. 3) of individual species within the extinction crisis. Within the project, birds are an index – markers that point to the ecological, cultural and ethical dimensions of the extinction crisis more broadly.

In the first part of this paper, we frame the Precarious Birds collaboration as an ‘expanded conversation’ about avian extinction. This conversation is played out between humans, nonhumans, texts and material processes, and has two primary objectives. First, we individually engage in deliberately slow creative practices – with a focus here on drawing and cross-stitch – as a way to ‘stay with the trouble’ of avian extinction. Second, in conversation with each other and the artefacts from our individual creative practices, we work through ways to articulate the complexity of human-avian entanglements and process the grief – and opportunities for hope – resulting from this work. We show how the

methodology of The Phenomenology and Imagination Research Group (PIRG), particularly their ‘table method’, has informed the framing of Precarious Birds as an expanded conversation, and briefly discuss our Research Through Design approach, which frames the creative practice as research.

The second section of the paper describes our ongoing creative processes in response to two birds – Passenger Pigeon (*extinct*) and Laysan Duck (*critically endangered*) in order to demonstrate how our expanded conversation unfolds through visual, material and verbal interactions. Here, we attempt to translate our collaborative conversation onto the page by writing in first person and interrupting each other as we would while working in tandem. We also include images of our workspaces and creative output, with captions that include the readings and podcasts we discussed while crafting alongside each other, to point to the fact that these texts inform our thinking *while* making. The conversations presented in this section of the paper were either scribed, or transcribed from audio recordings, while we worked. As such, this documentation of our expanded conversation captures reflections *in* action that we later use to inform reflections *on* action – as demonstrated in the Discussion section that follows. (Schön 1983; Sadokierski 2020)

The Discussion and Conclusion sections argue that our deliberately slow processes of drawing and tracing open opportunities for us to understand the ‘entangled significance’ of individual species within the extinction crisis, and that through documenting and sharing our expanded conversations, processes and artworks, we contribute to cultural ‘archives of loss’, which foster collective cultural memory about precarious bird species.

Expanded Conversations: Drawing ourselves into the trouble

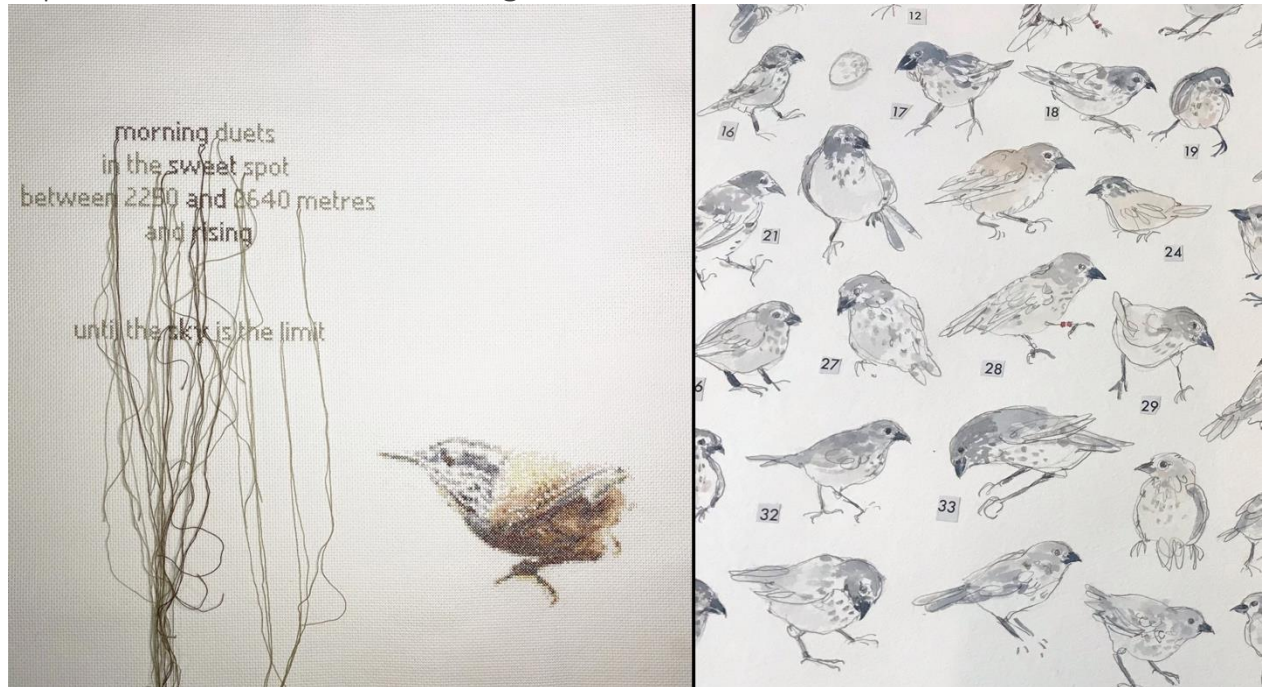


FIGURE 1: (LEFT) CROSS-STITCH POEM MUNCHIQUE WOOD-WREN, AUTHOR 2. (RIGHT) DETAIL DRAWING EXERCISE – AS FEW AS 40 MANGROVE FINCHES REMAIN IN THE WILD, THIS DRAWING VISUALIZES HOW FEW 40 BIRDS IS, AUTHOR 1.

Throughout a fifteen-year friendship, we frequently discuss our shared love of birds, and increasing feelings of hopelessness and grief related to cascading species extinctions. In 2018, while living on different continents, we began a ‘conversation through making’ to bear witness to and/or memorialise

precarious bird species. Each month, we assigned each other a bird from the International Union for Conservation of Nature (IUCN) Red List categories 'Critically Endangered' to 'Extinct' and posted/emailed our creative responses to each other: writing, drawings, cross-stitch poems, even a message delivered by carrier pigeon.

In focusing on one species at a time, we create manageable opportunities to process the overwhelming and almost inconceivably large phenomenon of the Sixth Extinction (Kolbert 2014). In addition, paying close attention to individual species is also a way to recognise the profound loss of each unique bird as it slips from the world. Writer and critic James Bradley (2017) states: "Extinction is a rupture in the world. Each time a species is lost it takes with it not just its genetics, but its nature, its way of being in the world. And as it does the universe is lessened."

Focusing on individual species in order to tell complex 'extinction stories' is an approach championed within Extinction Studies, an interdisciplinary field which generates "detailed case studies of complex processes of loss, exploring the 'entangled significance' of extinction" in relation to particular extinct species, and situates those case studies within "a larger, multispecies world." (Rose et al. 2017, pp. 2-5) When establishing the Precarious Birds project, we discussed examining the 'entangled significance' of each bird species (although we had not discovered that term or Extinction Studies at the time) – examining entanglement not only with other species affected by the loss of a bird within an ecosystem, but also how human and nonhuman actors are entangled within the story of each bird.

The collaboration was initially inspired by John Berger and John Christie's book *I Send You This Cadmium Red*, a conversation via post in which the authors' personal lives are threaded through provocations about art. Similarly, we began sending each other drawings and cross-stitch poems as prompts to think through and respond to, unapologetically entangled with narratives about our personal lives, to recognise the importance of facing the emotional and cultural aspects of the extinction crisis. Pinned in each other's studios, these handmade things remind us that we are not grieving alone and provide a way to be present in each other's workspaces, even when physically distant.

The approach of integrating personal with professional in our slow collaboration also mirrors the way Anne Douglas frames her work as capturing "a moment in time of a more extended, reciprocal process", a collaborative process which questions the "tendency to separate the private and public into different spheres and instead seek the private within the public, acknowledging the one as co-constituting the other." (2019, p. 4)

In 2019 we spent two weeks focused on the project at an artist residency in upstate New York, and since mid-2020, when we have been both based in Sydney, we have dedicated two hours a fortnight to working in tandem and supporting each other in this emotionally taxing project. This ongoing exchange is an enactment of Donna Haraway's provocation that we need to "stay with the trouble of living and dying together on a damaged earth." (2016) Our motivation aligns with many other artists, writers and designers responding to the extinction crisis through creative practice, stepping out of disciplinary silos to generate narratives that seek to reconnect people with the living world and open thresholds for transformative learning experiences. For example, in his film *Albatross*, Chris Jordan (2017) articulates a key motivation for responding to ecological despair through creative practice:

"I believe in facing the dark realities of our time, summoning the courage to not turn away. Not as an exercise in pain, or punishment, or to make us feel bad about ourselves. But because in this act of witnessing a doorway opens."

Method: Expanding the expanded conversation

As the project develops, we increasingly draw on more than our own lived experience and creative practice, bringing in knowledge from scientific reports, scholarly articles and books and interviews with experts from interdisciplinary fields. Investigating ways other researchers frame the integration of scholarly texts with creative practice and subjective experience, we were inspired by the 'expanded conversation' methodology of the Phenomenology and Imagination Research Group (PIRG), which aims to link theory and creative practice more closely through collaborative material engagement. (Nitzan-Greenac et al. 2019) Informed by phenomenological understanding of texts in relation to lived bodies,¹ PIRG developed their table method (*tm*) as a hybrid reading group/creative workshop in which participants gather around a table covered in black paper and tools, in order to collaboratively respond to a scholarly text through performance (reading parts or the whole text) and material thinking (sketching and crafting in response to the text). This process of critiquing texts through embodied, material engagement demonstrates unique ways practitioners can conduct scholarly research: "As artists/practitioners we tacitly understood that the unpicking of complex ideas can be enriched through doing, through embodied action." (ibid pp. 2-3)

PIRG frames their *tm* as a deliberately slow method which draws researchers and their material practices into the centre of the enquiry: "an invitation to sit with, listen to, digest, allow time to experience, draw out, to collaborate and engage in a material conversation. Through doing this we build a phenomenological conversation of care and attention to ourselves and others, both human and material participants." (ibid p. 8)

Similarly, Precarious Birds is slow by design. An ongoing project with no fixed endpoint, our deliberately meandering process affords space for processing grief, fostering care and opening up 'pauses' (Nitzan-Greenac et al. 2019) and 'arts of noticing' (Tsing 2015). We read parts of text aloud, and listen to relevant scholarly audio books and podcasts while engaged in our creative practice, allowing ourselves to work through complex and unsettling ideas as well as 'conversing' with our individual material practices.

¹ In particular Gaston Bachelard's notion of 'material imagination', Susan Kozel's 'A Phenomenological Enquiry in Five Acts' and Karen Barad's 'diffractive methodology'.



FIGURE 2: STUDIO SPACE AT ARTS LETTERS AND NUMBERS RESIDENCY, AVERILL PARK, NEW YORK, 2019. LISTENING TO PODCASTS BY TONY BIRCH AND DEBORAH BIRD ROSE FROM THE AUSTRALIAN MUSEUM'S HUMAN NATURE SERIES, AND 'SITTING IN A CIRCLE' FROM THE AUDIO BOOK OF ROBIN WALL KIMMERER'S BRAIDING SWEETGRASS. ON THE RIGHT, A MINI EXHIBITION SPACE WE SET UP IN ORDER TO BE ABLE TO HOST A SERIES OF CONVERSATIONS WITH LOCAL ARTISTS AND INTERESTED CITIZENS THROUGHOUT THE RESIDENCY.

Although we describe our project as an expanded conversation, we do not formulaically follow PIRG's *tm* (our tables are not covered in black paper and our material thinking is conducted through particular practices – cross stitch and drawing – rather than an array of 'mismatched' tools). Nevertheless, our processes align with theirs by valuing space and time for embodied, conversational collaboration, what PIRG describe as: "a 'field of possibilities', a space where the materials of text, paper, words, written and spoken, each body and the many bodies around the table, act as matter to create a material conversation." (Nitzan-Greenac et al. 2019 p. 11) It matters that we perform our individual practices alongside each other, or tangibly share our material experiments by posting them to each other. It matters that we make time and space to be in physical proximity to each other, to open 'fields of possibility' in which to both process grief and find hope (or at least motivation for action) through making and sharing.

Another key difference between PIRG's and our approach is that where their practice engages specifically with interpreting phenomenological texts, ours engages with writing from a range of fields including the environmental humanities, extinction studies, ecological science, design and sustainability studies. Rather than responding to a singular text or theorist, we start each iteration of our collaboration with a subject – an endangered or extinct bird – bringing interdisciplinary texts and design precedents to the table around this shared subject matter (see Fig. 3). As such, this paper extends PIRG's 'expanded conversation' methodology by pointing to how their phenomenological approach might be used to interpret texts beyond phenomenological theory.

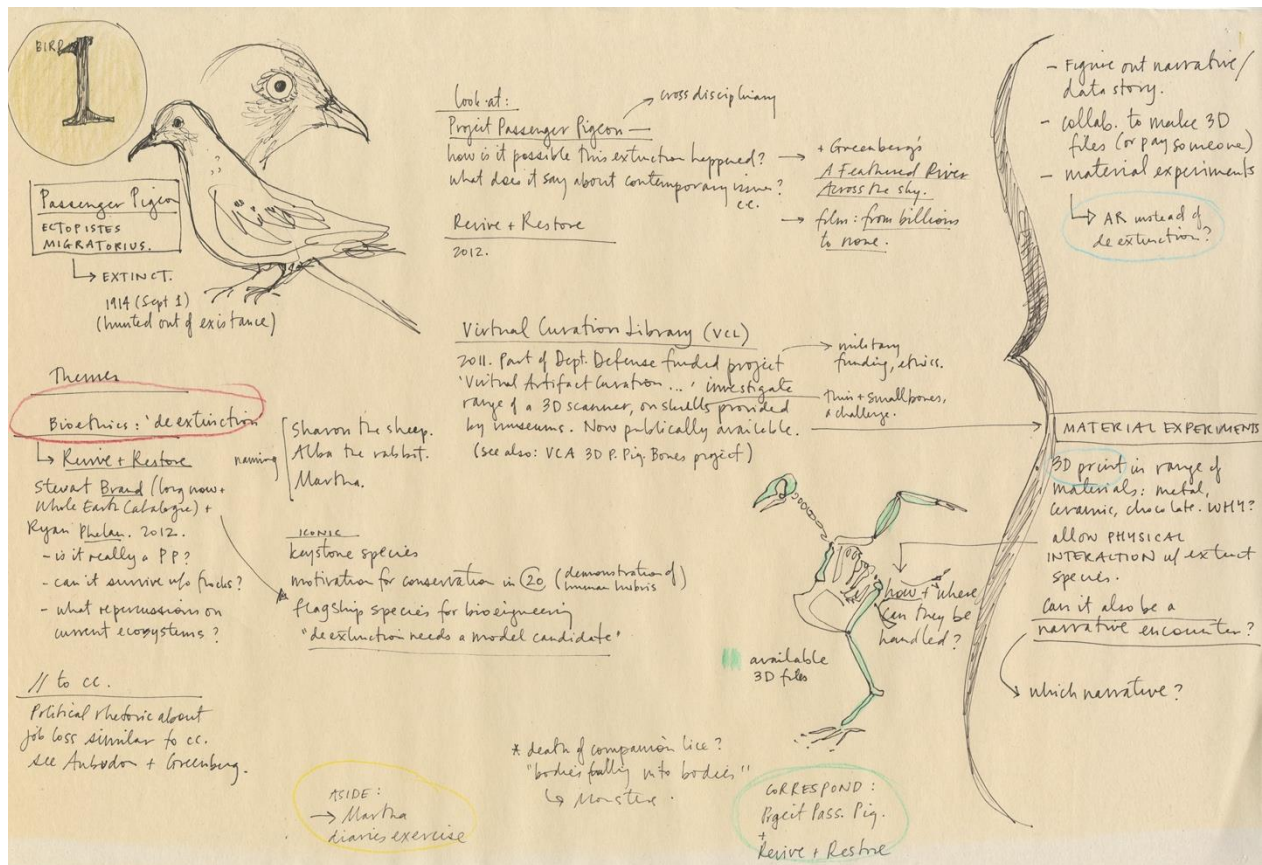


FIGURE 3: AN OVERVIEW MAP OF TEXTS, PRECEDENTS AND COLLABORATORS BROUGHT 'TO THE TABLE' AROUND THE PASSENGER PIGEON, AS WELL AS EARLY DESIGN CONCEPTS.

Our process also follows a Research through Design (RtD) methodology (Frayling 1993; Durrant et al. 2017) in which research aims and questions emerge through critical documentation of iterative, creative practice. (Lambert & Speed 2017; Sadokierski 2020) An aspect of the collaboration not reported here is Critical Documentation of the ongoing process through overview mapping, audio recording and critique sessions with interdisciplinary experts, which will ultimately inform a substantial scholarly report of the project as an exhibition and book of extinction (and hopefully recovery) stories.

In the following section, we describe our evolving creative processes in relation to two species – Passenger Pigeon and Laysan Duck – in order to demonstrate how our expanded conversation about avian extinctions meanders through visual, material and verbal interactions. This part of the paper is an assemblage of conversations from our journals, emails and letters to each other, and transcripts of audio recordings made during our working sessions. We present it here as a dialogue, in an attempt to translate the expanded conversation onto the page rather than trying to rein it in to a more conventional scholarly argument. Alongside imploring us to stay with the trouble, Haraway also reminds us that it matters what and whose stories we use to tell stories, and gifts us the idea of 'compost writing': "writing-with in layered composing and decomposing in order to write at all, living-and-dying with to be at all, as mortal earthlings." (2015) Following this section is a discussion section, drawing together some of the key themes and ideas that emerge from this 'compost writing'.

Passenger Pigeon: Drawing into being

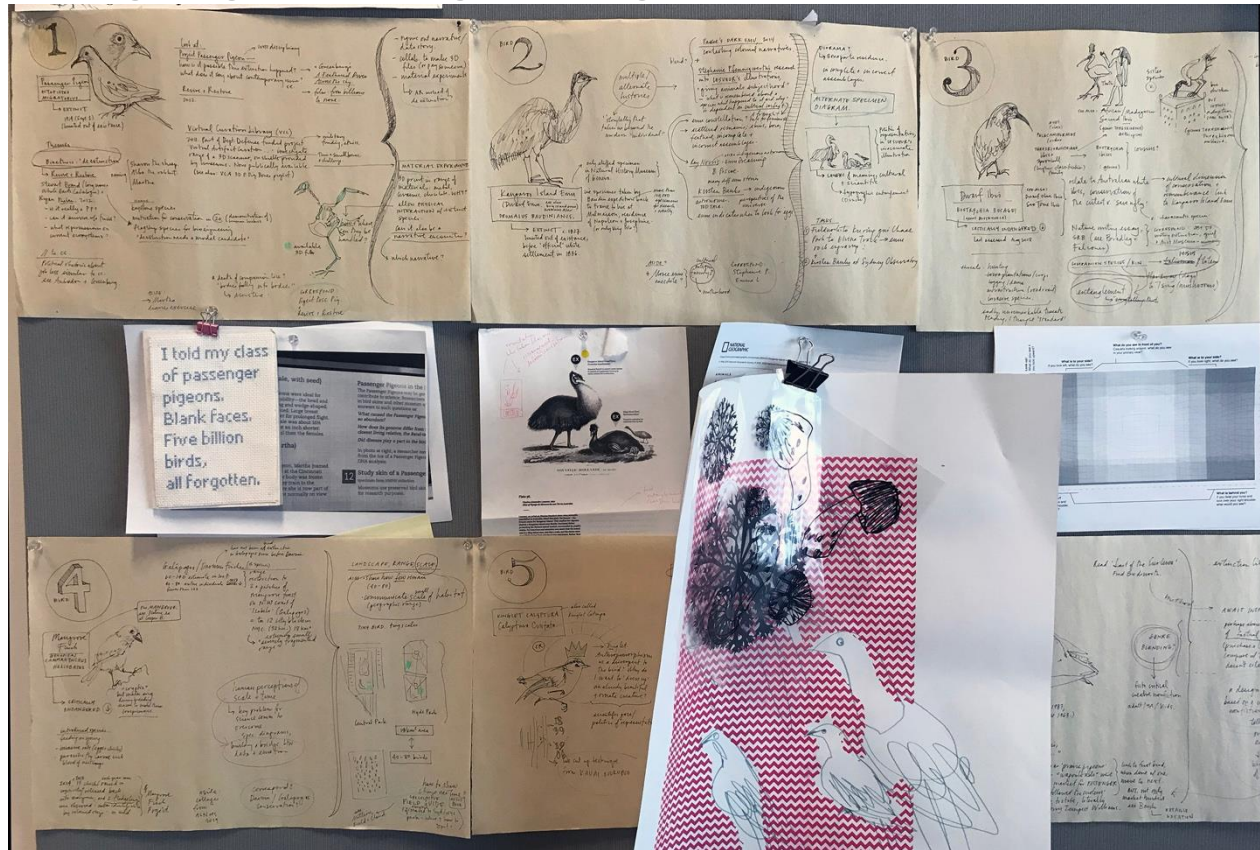


FIGURE 4: ‘BLANK FACES’ CROSS-STITCH, NESTED AMONG OVERVIEW MAPS OF VARIOUS BIRDS IN AUTHOR 1’S OFFICE. SURROUNDING WORK INCLUDES OVERVIEW MAPS FOR SIX SPECIES, A SCREEN PRINTING EXPERIMENT MENTIONED IN THE TEXT AND ANNOTATED SCHOLARLY ARTICLES THAT INFORM THE PRACTICE.

Z: Before we started this project, you posted me a cross-stitch poem which reads: “I told my class of passenger pigeons. Blank faces. Five billion birds, all forgotten.” When you assigned me the passenger pigeon (*Ectopistes migratorius*), I was a blank face. I didn’t know that over 50 years – two human generations – billions of passenger pigeons were hunted to extinction. Our blank faces are an example of ‘shifting baseline syndrome’: forgetting past species, cultures, landscapes as the planet mutates before our eyes. (Svenning 2017, p. G68)

The first time I drew Martha, she was a chalk outline. I emailed you a photograph of the drawing, which also includes my shadow and R, then 2 years old. His presence is significant. My email to you included:

When you posted an article about the confirmed extinction of Spix's Macaw, my first thought was 'this bird vanished as R entered the world'. A bird that may have existed when R was born is now gone, with him still in nappies. A bird my son will never meet. This is a new lens through which to filter loss.

*In the small park opposite our house, I showed R the eclectic company of Crested pigeons (*Ocyphaps lophotes*), Australian white ibis (*Threskiornis molucca*) and Noisy miners (*Manorina melanocephala*). I named and drew the birds in chalk. I thought of Martha, who I'd been researching for this project, and I told him the*

story of flocks of passenger pigeons so dense they blocked the sun for three straight days. I couldn't tell him that Martha, the last passenger pigeon, died 1 September 1914 and that Martha's family numbered in the billions just two generations before her death. I couldn't tell him this part of the story because I'm not ready to tell him about death, or how, in the words of Yuval Noah Harari, he is born into a species of ecological serial killers.

In 2019, almost exactly a year after drawing chalk-Martha, I titled a blank book 'Martha' and drew her, referencing the first photograph that appears in a Google search (Fig. 5). Since then, I have drawn Martha more than ninety times. It matters that I draw from photographs of Martha, not just any passenger pigeon. She's the ending, the last of her species; it's her story I want to preserve.

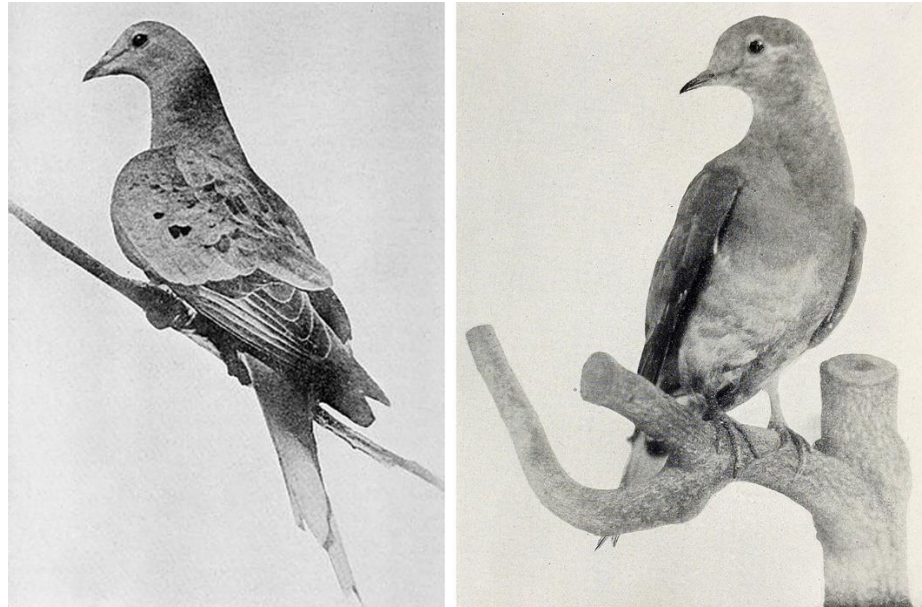


FIGURE 5:
(LEFT) MARTHA THE LAST PASSENGER PIGEON, ENNO MEYER, 1912, PUBLISHED 1921. PUBLIC DOMAIN.
(RIGHT) 'STUFFED SKIN OF MARTHA', 1921, ROBERT W. SHUFELDT, PUBLIC DOMAIN.

T: Drawing Martha, is it an exercise of breathing life into her? Because the original is a dead, mounted pigeon, a kind of a self-mausoleum to a species. And yet the drawings for me have more life than the original; you could imagine her taking flight any second, cooing to her partner, picking up an acorn and eating it.

Z: I didn't intend to resurrect Martha through drawing. At first, I just wanted to claim time—even 60 seconds a day—to tend to my practice at a time I was feeling lost and overwhelmed. Doing a daily drawing harks back to our early working relationship. Most afternoons in 2009, I drew a bird on a post-it note. At the time I was going slightly mad trying to finish my doctoral thesis. You were the same kind of mad and also an avid twitcher. To avoid discussing our ontological positions, we started talking about ornithology. At 3pm I'd stop what I was doing, draw a bird on a post-it and stick it on your office door. This '3pm Project' was inspired by Lauren Nassef's 'drawing a day' project (2007–11) and designed to keep my drawing hand active during a period of heavy typing and 'drowning-not-waving' theoretical reading. Drawing Martha started as a similar escape, this time from the domestic and administrative load that pulls me away from my creative work.

Drawing is a mindful activity, a design version of guided meditation. Drawing Martha was a way to resurrect my own creative practice.

T: Drawing as a trace of the arm/hand movement, trace of life, in something that in reality is doubly dead: dead as an individual, dead as a species. The busyness of the linework captures the feathers, but there is also frustration and a quickness.

Z: I have stared at those dull photographs of Martha for hours, but I have no sense of how she would have moved, sounded, or smelled. I find taxidermy visually fascinating but never emotionally engaging. Glass eyes are no way into a soul. Then, at the American Museum of Natural History, we turned a corner and happened upon the passenger pigeons display – a flock of stuffed birds arranged on a model tree – and I wept. Martha was not among them, yet for me, she was present. I see the frustration in the sketches, but I can't easily separate the frustration of my personal circumstances and the ecological crises I'm thinking through.



FIGURE 6: A SELECTION OF MARTHA DRAWINGS, 2019-2020, AUTHOR 1.

T: Flipping through the Martha book made me think of when a scratched record gets stuck, you can only keep drawing this last picture of Martha, stuck where she is in time. A live bird would have more angles. Extinction is a rupture in the DNA of all life.

Z: While trying to find Timothy Morton's definition of 'hyperobjects' as you made that comment about scratched records, I opened his book to this: "The needle skipped the groove of the present. Into this dark forest you have already turned. I take present to mean for the last twelve thousand years. A butterfly kiss of geological time." (Morton 2018, p. 2).

Coincidences like this emerge frequently in our conversations. Tracing and retracing lines between each other's work, and encounters with other work, that loop and trace endlessly.

Flicking through the Martha book, traces of my mood and dedication to the task are visible in the drawings; days I have time and patience to render a thoughtful image versus days I only manage a quick scribble. Alongside the drawings are traces of public and private life.

I intended to annotate each sketch with the drawing implement and duration. But by day 3, R creeps in: '4 Oct / elegant writer + copic / drawn alongside R, time uncertain'. An acknowledgement that parenting and maintaining creative constraints (annotating an accurate duration of a drawing) wasn't going to work. Accuracy aside, stories can be drawn out from the annotations: the longest stretch of continuous drawings is 16 days; after a 10-day break, I draw from a different photograph, explained by the caption *time for a new perspective*; more than once, scribbled edits reveal that I don't appear to know which month it is; a reflection on the elasticity of time during the Covid-19 lockdown. The longest gap is the month of November 2019, because I didn't take the book overseas to the artist residency. On 4 December 2019, the day I arrived home, I drew Martha, followed by a note:

"On Haphazard Perseverance:

I felt a little like I'd failed – I wanted to draw Martha every day – I'm not sure how long, ambitiously a year, but only made 4 days straight. Rather than a failure, this exercise is an accurate reflection of my capacity to care for/about the natural world. My professional and domestic life pull my focus and discipline away. But I return, and try again. Which counts for something."

Feelings of guilt about my lack of commitment to the task are frequent in 2020. 16 Feb: *I'm sorry Martha, for my neglect.* 17 April: *First drawing since 6 March. You'd think that covid-19 lockdown would provide plenty of time to draw. But I've never worked harder and got less done. Drawing has always calmed me, why am I avoiding it?* 15th June. *When I draw regularly I know her form instinctively. I've lost it. I'm exhausted. Bushfires, Covid, BLM. Facing my privilege.*

In mid-2020, A [my partner] is in a redundancy meeting, using my laptop to video call and my phone to record it. Standing uselessly in the kitchen, I reach for the Martha book and draw her from memory (I usually use my phone to draw from a photo). Martha looks anxious – traces of my emotional state in her drawn form. Martha has become a totem; I conjure her through drawing when I need comfort.



FIGURE 7: ACCIDENTAL COLLABORATIONS WITH R, DRAWINGS IN THE MARTHA BOOK DRAWN OVER BY HIM. AUTHOR 1.

Also in 2020, R became fascinated by Martha's death and my process. I begin writing his questions onto the page. 4 Jan: *Mum, why did they shoot Martha? Why did they kill her family?* 22 April: *Why did people kill all Martha's family? How did they kill them? Why?* On this last page, a blue striped square is captioned 'R drew the egg.' After months of passive observation, R started to paint or draw on top of my drawings. At first, I was conflicted; I try not to art direct him but found myself possessive over the Martha book. One day when he messily painted over my drawing in red acrylic, I had to walk out of the room to hide my frustration. I gave him his own book, in which he chose to draw dragons instead of birds, but for a while drew together at breakfast, resulting in my longest continuous drawing spree. Months later when I suggest we draw, he still asks "Will you draw Martha?" When you assigned me the passenger pigeon, I was a blank face. Now, Martha is part of my family story.

My slow turning to face the ecological crisis is directly related to my son, and the generations that follow. In Rebecca Huntley's book *How To Talk About Climate Change in a Way That Makes A Difference* (2020) she describes a transformative moment, watching news coverage of high school students' climate protests; how would she answer her daughters when they ask what she was doing to help? Huntley describes her transition from being concerned to alarmed about climate change as a jolt. Mine was slower but no less uncomfortable. Returning to work from maternity leave I experienced a seeping unease; if I'm not using my privilege (access to day care, financial and domestic security, access to information and influence over people's education) to address some small part of the crisis, how would I look my child in the eye and say 'I did what I could'? I bear witness to Martha, R bears witness to my response. When he asks me, what did you do, I can remind him he was present in my action.

14 July: *Almost a month since my last sketch and it's like I don't know her form at all. 2020 is a mess.*

That's it, the last drawing in the book. But yesterday, 21 August 2020, I ran a screen-printing workshop for my Honours students. I drew her in pencil on a large page and overprinted a zigzag pattern. As I was drawing, the shape was familiar, but it was no longer Martha. It was a line that I know. After almost two years of regularly drawing Martha, I worry I have flattened her, reduced her to a line that my muscle memory can reproduce without emotional engagement. Or instead, by committing her form to memory, in my head and my hand, have I somehow consumed her, incorporated her into my being? When you thumbed through the book for the first time, you chuckled and said: *you don't need to worry that you've flattened her, she's very much alive in here*. I hope you are right. I may need a new book, or a new approach, to breathe life into her again.

Laysan Duck: tracing with words and thread

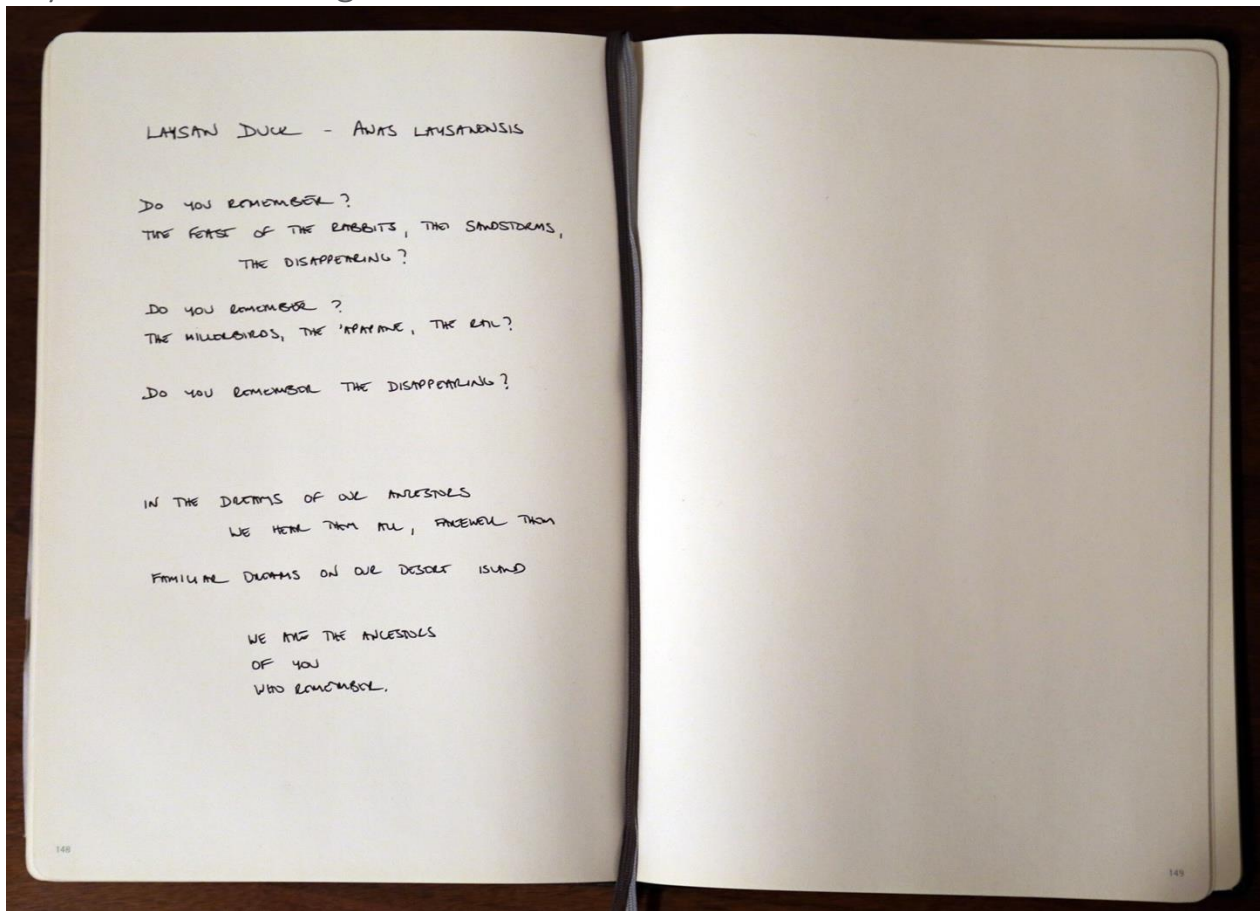


FIGURE 8: LAYSAN DUCK BY TIMO RISSANEN, 2018.

T: The short poem about the Laysan Duck (*Anas laysanensis*) is a tracing of the species' precarious existence during the past century; 1912 marked a nadir of 12 individuals [see Fig. 8]. The poem memorializes the other species and subspecies lost forever: the Laysan Rail, the Laysan Millerbird, and the Laysan 'apapane, first made vulnerable after introduced rabbits denuded the island of most vegetation. The image traces what for a long time was one of the few photographs available of a Laysan duck brood, taken by Dr Michelle Reynolds of the U.S. Geological Survey (see Fig. 9). The poem speaks of us (humans and non-humans) being those

who remember the Great Disappearing, but also the ancestors of those (humans and non-humans) who will remember what was lost on Laysan. The poem records the memory of the already lost species of Laysan Island for future generations of humans and, perhaps, for Laysan Ducks. Given the threat of rising sea levels due to climate change, the work may in time become a memorialisation of the island itself.

The photograph of the Laysan Duck brood is hopeful. The mother and five ducklings calmly walk away from the photographer; nothing about the ducks' appearance suggests concern. The image conveys a sense that the species may be, for now, secure, with more than 600 individuals in three locations.



FIGURE 9:
(TOP) LAYSAN DUCK BROOD,
UNDATED, DR MICHELLE
REYNOLDS, U.S. GEOLOGICAL
SURVEY, MANIPULATED BY
TIMO RISSANEN. PUBLIC
DOMAIN. (BOTTOM) WORK IN
PROGRESS, 2020.

Before generating a cross stitch pattern of the photograph, I increased the transparency of the image to communicate a sense of precarity. The aida cloth in its grid weave is like a canvas of blank pixels and some 'pixels' are left bare.

Z: Textile artist Cecilia Heffer describes walking up and down Wamberal Beach while making the lacework 'Drawn Threads' as a way to 'physically think' through ideas. For Heffer, walking is a meditative practice that parallels the way she 'draws' with a sewing machine to make lace:

“Through my walking I have become a physical bobbin in a landscape, creating lace tracks (threads) back and forwards on its ephemeral shore.” (Heffer 2015, p. 76) Her walking and sewing are necessarily separate activities (I’ve picked up her sewing machine: it is heavy), but you are able to perform your practice in different locations. When you are stitching, does it matter where you are? Do you feel you ‘draw in’ the physical location to your stitching process? The traces of where you perform your practice would not be visible to others, but are they visible to you – what memory resides in your cross-stitch pieces of their creation?

T: Extinction is inseparable from place, yet it is often discussed in an abstract, placeless manner. The place/s of stitching in the project become/s embedded in the memory I have of each piece, and the piece becomes a trace of those places. I began the Laysan Duck piece at the residency in upstate New York, and have since stitched it in Queens, New York, and my office at UTS, all the while thinking of a small island in the Pacific Ocean. These experiences ground the project in place, on land, and they embed a resonance of these places into the piece. While the experience of the places is not available to a viewer, by virtue of being available to me, the maker and storyteller, the piece becomes significant. Pajczkowska (2010, p. 147) writes: “The stitch, like the hand-drawn line ... is the trace of a movement that refers us to a time in which experience was tangible and available through the senses as guarantor of presence.”

I use words and imagery in compositions that I cross stitch. I write poems about the species and compose these on the cloth with an image of the bird. Why is it important to cross stitch them? In the investment of time and care in a physical object through a slow repetition of hand movements with a threaded needle, there is a transference of care: the object becomes sacred. In discussing the significance of the hand in making, Pajczkowska (2010, p.136) suggests that “the trace of the hand within representation is capable of signifying memories of profoundly affective states.” This resonates in reflecting on the work for Precarious Birds: viewing the stitched work elicits memories of the emotional responses to reading about the extinction crisis.

Throughout human history textiles have been sacred, spiritual, magical, as well as utterly ubiquitous and banal. The textile works in Precarious Birds dance between the two: the sacred is imbued in pieces of cloth that could easily be on a scatter cushion in a pile of many. Perhaps the same could be said of the extinction crisis: the grief of the losses is profound and spiritually shattering, and yet easily rationalized (profaned?) as collateral damage of “progress”.

Z: In a performance spanning a year for the 2020 Sydney Biennale, Lucienne Rickard drew an extinct species, erased it and drew another on the same surface, building layers of traces of loss into the paper. Her drawings disappear like the species. Why should we be precious about the fragility of our work when species are going extinct because we haven’t cared about the fragility of our shared environment? When is fragility valued?

T: There is tension in the work in that it is created by countless hours of touching through stitch, and the tactility of the cloth is increased through that work. Yet the end result is one that, in a conventional gallery or museum setting, cannot be touched by an audience because it would wear out quickly. But perhaps touching the work should be welcomed and the inevitable destruction of the work through touch is accepted to be a part of the work, since it is about loss anyway?

Discussion: Creating archives of loss, for those who follow

The previous section presented an edited selection of thinking *in* action, scribed or transcribed from recordings while we worked, as well as some dialogue taken from emails and journal entries about our reflections on action. In this section, we reflect further *on* that documentation of practice, in order to draw further insights for the larger project.

Through our expanded conversations around the Passenger Pigeon and the Laysan Duck, ‘tracing’ emerges as a theme: traces of the hand in both cross stitch and drawing; traces of our personal lives and the places in which we generate the work; traces of histories in the sourced images of lost and precarious birds we work from; tracing the shapes of extinct and critically endangered birds in line and thread. Leaving traces creates pathways for others to follow; opening new thresholds for interpreting both our work and the complex ecological, cultural and ethical issues it addresses. We return to Chris Jordan’s proposition that “in this act of witnessing a doorway opens”, and recall Robin Wall Kimmerer (2013):

"Weep! Weep! calls a toad from the water's edge. And I do. If grief can be a doorway to love, then let us all weep for the world we are breaking apart so we can love it back to wholeness again."

Reflecting on his grief at the demise of deep-sea kelp forests John Charles Ryan (2020) writes, “What does it mean to mourn the loss of something not encountered *in situ* but which, nevertheless, saturates the imagination?” (2020, p. 187) Unable to visit the kelp in person, Ryan turns to written accounts and visual depictions of kelp forests, which he calls ‘archives of loss’. Similarly, unable to visit extinct birds and unwilling to tramp into vulnerable landscapes to spot critically endangered birds in person, we too turn to archives of loss to bear witness to these birds’ existence, examining archival photographs and natural history illustrations, reading observations written by people who witnessed both previous abundance and systematic killing of species, and wading through scientific reports that quantify the decline of birds and other species, mostly due to human interference in the natural world.

In addition to examining archives of loss, our project contributes new material to these cultural archives – the artworks, and documentation of work in process, produced through our expanded conversations. Our extinction stories contain traces of the attention, care and grief we paid to each species, but also traces of the various human and nonhuman actors who contributed to our expanded conversations. According to the editors of the book *Extinction Studies*, such ‘extinction stories’ allow us to explore the ‘entangled significance’ of extinction, providing “narrative-based engagement that explores what an extinction means, why it matters, and to whom.” (Rose et al. 2017, p. 3)

The performance of our practice is important to both how we collaborate, and how the work is perceived by others. In our visual and material representations of critically endangered and extinct birds, we leave traces of our process for viewers to encounter; ‘guarantors of presence.’ For example, the pixels, and therefore stitches, left blank in the Laysan Duck cross-stitch poems, as well as the threads left hanging from the front of final work, are material cues for future viewers to consider the presence of the maker. Drawing attention to the act of making invites reflection on the time and care that is stitched into this artwork. It invites the future viewer into the work, to empathise not only with the precarious circumstances of the bird (and other species on Laysan Island) but also the dedication of the maker in performing this slow process of representation. These material cues invite viewers to consider the

personal and the public, the objective factual with the subjective emotional, to bridge the gap between scientific fact and lived experience.

Annotations in the Martha book reveal how the drawing practice unintentionally drew another participant into the conversation – R. His unexpected participation, which evolved simply through being in proximity to the activity and wanting to understand what his mother is doing, drawing the same bird over and over, expands not only the conversation about Martha’s extinction, but later our shared conversation about the relevance of this project more broadly, for those who follow. R bears witness to his mother bearing witness to a single, dead bird, through repetitive drawing. Rather than a story narrated orally or through a picture book, it is a story performed through making. Bearing witness to the creative act opens a door to memorialising an extinct species for a generation too young to remember.

Although it’s too late for Martha, and other extinct birds, it is not too late to preserve the memory of their species. Each year on September 14, the anniversary of her death, we share some of the Martha drawings on social media. Initially, drawing Martha was a personal processing of grief. Now, the collection of drawings forms a new addition to Martha’s archive of loss, a tool to help embed Martha into the memory of those of who can never encounter her kind.

There is hope embedded in this act of passing the memory of Martha to another generation, because the thought of us no longer remembering Martha or her species at some point is overwhelmingly sad. David Haskell (2018) anticipates the future value of ecological remembering:

In coming years, our children, students, and friends will need our stories. In our listening to birds, we might gain something worth telling the future, tales whose meanings are now unforeseen: That ravens fell silent in the late summer heat, sandhill cranes passed in March but did not linger, orioles and flycatchers wove their summer songs into the tops of cottonwood trees, and warblers departed suburban fir boughs in December. These will be stories of continuity, of extinction, of blossoming, of changed tempo and texture. Coming generations depend on us to convey these living memories. We start in the present, by listening.”

While maintaining hope is important, it is also dangerous; hope can lure us away from the action that is urgently needed at a time of overlapping environmental crises. Donna Haraway (2016) instructs us to stay with the trouble; to own our part in what’s been done. Deborah Bird Rose (2017) extends Haraway’s much-quoted phrase to: “staying with the *human* trouble” [our emphasis], calling for us to expand our narratives beyond human exceptionalism – beyond accounts which “stress our wondrous superiority” that we are the only animal with language, tools, mindfulness – to include more truthful accounts of the exceptional cruelty and damage humankind reaps. Rose insists we linger with this: “it is terrible stuff to have to stay with for too long, but those who suffer, whether human or more-than human, don’t have a choice. They have to stay with it, because they are experiencing it [...] we are called to bear witness and to offer care.” (G55-56)

Underpinning our collaboration is a proposition: in a time of crisis, it is not possible or useful to separate the professional and the private. Extinction events are part of Earth’s history, but this is the first one known to be caused by the activities of a single species, *Homo sapiens*: a Great Erasing. As artists, and as citizens, we are entangled in the extinction crisis (and the interconnected climate crisis). However, extinction, the loss of biodiversity, is the domain of conservation biology – a ‘hard’ science from which

we expect an objective distance. Thierfelder (2019) notes how the process of producing scientific visualisations – translating handwritten notes taken in field journals into data spreadsheets, then digitally rendered charts or graphs – erases the traces of the human researcher. The ‘thick description’ of the environment in which the data was collected and the “emotions the work triggers in the biologists” are lost:

“The handwriting of the researchers, the visibility of their diverse notation skills, the conditions of the field work and their motives that were visible within the field notes are erased by digital devices and computers. Only then do the visual representations count as a scientifically valid result. During this process the researchers have to make themselves invisible from their own work in favour of the representation of an objective research collective and the unification and simplification of their data set.” (Thierfelder 2019)

Yet extinction is not limited to scientists; the losses of this crisis belong to all of us who remain, human and non-human. In this project, we claim our share of the loss by making ourselves visible – through written, drawn and stitched traces – in the work, and the way we present it as an expanded conversation. Through our creative practice we say, *this is our business*, because in recognising the interdependencies of earth systems, it becomes impossible to remain uninvolved: doing something becomes an imperative.

Conclusion

In this paper we demonstrate how our Precarious Birds project is a creative collaboration through which we bear witness to avian extinctions, by tracing on page or cloth the shadow of a bird that once was. We frame the collaboration as an expanded conversation with two primary objectives. First, engaging in deliberately slow processes of drawing and stitching the stories of the ‘entangled significance’ of individual birds is a way to open spaces for care, attention and grief; to stay with the trouble of the extinction crisis. Second, through embodied conversations – with each other, with artefacts from our individual creative practices, and through shared scholarly research – we work through ways to articulate and share the complexity of human-avian entanglements, one bird at a time.

We draw on PIRG’s methodology to frame our project as an expanded conversation, but also extend their work by pointing to how this approach might be used to interpret texts beyond phenomenological theory.

Through our collaboration we are evoking, or at least searching for, hope in order to do something productive; to preserve ecological memory for future generations. Through accounts of two ongoing expanded conversations about the Passenger Pigeon and the Laysan Duck, we show how our work and documentation of our creative process is deliberately embedded with traces of the culture of care at the time of their creation; the works produced in this collaboration demonstrate care, guilt, shame, meditation, reflection. Where stuffed specimens presented in glass cabinets project a Man Conquers Nature narrative, our softer traces are an attempt to think with, to make kin, to record with respect and humility. In this way, the output from our project contributes to existing ‘archives of loss’ about bird species in different ways to written records, photographs, natural history illustrations, and scientific reports and specimens.

In performing this expanded conversation over a long – perhaps indefinite – duration, we keep these birds alive, by conjuring them in line and thread, and by sharing our work to mitigate against ecological amnesia about these lost and fading species. We have so far presented work from this project in NYC and Averill Park (USA), Sydney, Melbourne and Perth (Australia) and Brighton (UK). It was also presented on our behalf as part of a vigil on the steps of the American Museum of Natural History to commemorate Lost Species Day in 2019. Our commitment to bearing witness to avian, and other, extinctions will not end for either of us with this project: we will stay with the trouble in yet to be seen ways for our working lives, because we are unavoidably entangled in the crisis throughout our biological lives.

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