Animal Studies Journal

Volume 12 | Number 2 Article 12

2023

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Recommended Citation
Turner, Stephanie S.; Lindahl, EvaMarie; and Nicholson, Tara, Sites of Cultural Production in Response to Mass Extinction, *Animal Studies Journal*, 12(2), 2023, 247-275.
Available at:https://ro.uow.edu.au/asj/vol12/iss2/12

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Abstract

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Keywords

extinction, cultural production, art, storytelling, art history, nonhuman narratives

This journal article is available in Animal Studies Journal: https://ro.uow.edu.au/asj/vol12/iss2/12

Sites of Cultural Production in Response to Mass Extinction

A conversation with

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Abstract: This conversation, mediated by Tara Nicholson, considers Stephanie Turner and EvaMarie Lindahl's research in cultural representations of extinction and investigations of more-than-human forms of storytelling through an art historical lens. In response to Lori Gruen's classification, extinction is a distinctive loss of 'animal cultures'. It is more than biodiversity destruction or a static inventory of a species' death. Nonhuman ways of building bonds, reproducing, teaching offspring, constructing homes and mourning the dead, are all systems of knowledge lost in extinction (Gruen et al. 2017). This conversation offers compassionate ways of bearing witness to species destruction and a space for empathy and kinship. The authors ask, how can dialogue between science and art lead to new understandings of the 'wicked problem' of mass extinction during climate crisis? Examining methodologies of cross-disciplinary storytelling and cultural production, this exchange connects museum practice, large-scale public artworks and artistic research as types of embodied knowledge to promote public awareness surrounding the acceleration of species extinction.

Extinction, more than biodiversity destruction, is often described as a static inventory of a species' death. According to Lori Gruen, extinction must be understood as a distinctive loss of 'animal cultures'. Nonhuman ways of building bonds, reproducing, teaching of offspring, constructing homes and mourning the dead, are all systems of knowledge lost within extinction (Gruen et al. 2017). The conversation between authors in 'Sites of Cultural Production' is mediated by Tara Nicholson and responds to Stephanie Turner's research in cultural representations of extinction and EvaMarie Lindahl's investigation of more-than-human forms of storytelling from an art historical perspective. By examining the increasing effects of the Sixth Mass Extinction from a more-than-human perspective, that is, as a multispecies challenge in which humans, no less or more than any other species, must always be considered as being in relation with other species and their histories (O'Gorman and Gaynor 716), this conversation offers methods in producing compassionate forms of listening and a space for empathy and kinship. The authors ask, how can dialogue between science and art lead to new understandings of the complex problem of mass extinction during the time of climate crisis? Examining forms of cross-disciplinary storytelling and cultural production, this conversation connects museum practice, large-scale public artworks and artistic research as forms of embodied knowledge to promote public awareness surrounding the acceleration of species extinction.

Tara: Originating from design and systems theory, 'a wicked problem' is often described as a difficult or seemingly impossible obstacle with no single solution due to its social complexity, or as a problem seemingly impossible to resolve due to contradictory and/or changing requirements. Equally problematic, these conditions are often difficult to organize into one area of research (Rittel and Webber). Much of the criteria used to define a wicked problem can extend to our larger-than-life problems in the twenty-first century, such as the ongoing mass extinction of species. Rittel and Webber see every possible solution to a wicked problem as a 'one-shot operation' with no ability to pre-test or learn from trial and error. Fortunately, they state that 'every attempt counts significantly' in a search for a solution (173). Such approaches help describe the climate crisis and mass extinction as equally unique conundrums that are ever-expanding and face many known and undetermined obstacles. How might Timothy Morton's concept of ‘hyperobjects’, which he describes as phenomena that are ‘massively distributed in time and space relative to humans’ extend to and help us grapple with the ‘wicked problem’ of extinction (*Hyperobjects* 1)?

Stephanie: Morton does see some hyperobjects, such as global warming,[1] as wicked problems, in Rittel and Webber’s original formulation of the concept. As a wicked problem, global warming is complex, with many causes and solutions, making it challenging, even all-but-impossible, to address. Not all hyperobjects are threats, however, and this is important to the current extinction crisis. The biosphere itself, for example, though a hyperobject, is not a threat, while biodiversity loss is; both interrelated concepts challenge our perceptual abilities. We can appreciate the complexities of the global biosphere while also working to minimize biodiversity loss in ways that make sense for particular regions. In other words, we don’t have to completely understand the global biosphere to remediate specific losses of biodiversity within it.

Morton’s conceptualization of the extinction crisis as a hyperobject has a direct bearing on representational practices. All such practices, whether scientific or artistic, are – by definition – only partial solutions within this conceptual framework. In conservation biology, for example, researchers develop and curate huge databases of animal, bird and plant species to quantify their population density and assess the threat level to individual species, yet those numbers are always changing, and not all species have been accounted for. There are probably many species alive today, in fact, that have not yet been identified, and some of these may be threatened with extinction. A good example of this massive scientific effort to account for endangered species is the International Union for Conservation of Nature’s Red List of Threatened Species. What makes the IUCN Red List inherently partial, a work always in progress and ever incomplete as a catalogue of life on Earth, are the innumerable and ever-shifting anthropogenic factors influencing the very species vitality it is attempting to quantify – habitat disruption and loss, the introduction of invasive species and disease, and climate change impacts on migratory and reproductive behaviour, to name a few. The complexity of these factors, along with the technical limitations of the project itself (Bachman, et al.), reflect the scope of challenges involved in representing biodiversity decline.

To return to Morton's conceptualization of the extinction crisis as a hyperobject, along with the unavoidably incomplete response of these art/science collaborative sites, I'd like to point out Morton's insight into our human being-in-the-world in *All Art Is Ecological*. In that brief book, Morton observes that 'we are not human all the way through. We and all other lifeforms exist in an ambiguous space between rigid categories' (23). Coexistence is not a new idea, but the ambiguity of the space of that coexistence is worth thinking about further. Morton argues that this ambiguity is the space between thinking in terms of the individual versus thinking in terms of the entire species (24). Humans need to become less anxious about what he describes as the 'thousands of equally legitimate spatiotemporal scales' that scientists, artists, and philosophers acknowledge in their work (32). Yes, this entire world is a hyperobject, he seems to be saying, shot through with wicked problems like global warming and the current mass extinction. Intervening in such problems doesn't have to be revolutionary. Sites of interdisciplinary cultural production, like ecologically aware art, serve to remind us that we are 'always already' co-existent with the rest of the world. Once we realize the effect of such sites, 'there's no going back' (*All Art* 66). I would argue that the sheer abundance of science/art collaborations engaging with the biodiversity crisis in the early twenty-first century is evidence that a paradigm shift—altered perception at all levels by necessity—is afoot.

Tara: While the process of scientific discovery may be seen as linear, the way artists and scientists encounter problems is often very similar. The production of new ways of working, including the invention of new infrastructure or methodologies, and the use of cross-disciplinary forms of knowledge are all deeply connected to both science and art making. How is the work of scientists influenced by artists and vice versa? What historical and contemporary forms of art-making are influenced by scientific study?

Stephanie: It's important to keep in mind that scientists and artists have long been in conversation about the natural world. I'm thinking here of the era before photography, when naturalists either created their own illustrations, as John James Audubon did, or worked with illustrators to document their field observations of flora and fauna, as naturalist Alfred Russel Wallace did with the bird illustrator John Gerrard Keulemans. So extensive has this collaboration been, in fact, that science historians Lorraine Daston and Peter Galison refer to it in their book *Objectivity* as 'four-eyed sight'. Isabella Kirkland and Alexis Rockman are two contemporary artists that work in the vernacular of Victorian-era natural history illustration. Kirkland's painting *Gone*, a still life in the tradition of nineteenth-century realism, is significant in cataloguing the sixty-three species that have gone extinct since the 1700s due to human activity (fig. 1).

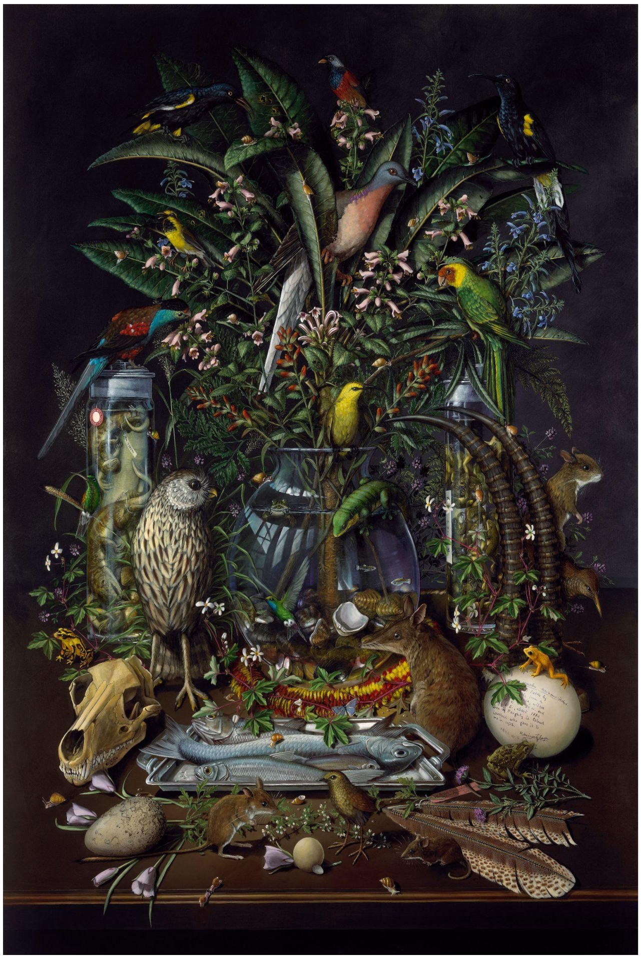


Fig. 1. Isabella Kirkland, *Gone,* 2004. By permission of the artist.

Rockman's painting *Tree of Extinction*, referencing the 'tree of life' illustrations of the nineteenth century depicting species evolution, includes several animal species, such as the thylacine and the dodo, that are now extinct due to human activity. The effect of these watercolour creatures blurring and fading into the background of the 'tree of life' is an ironic commentary on human interference in natural evolutionary processes. Indeed, conservation scientists Aaron Ellison and colleagues point out in the *Bulletin of the Ecological Society of America* that artists enhance the impact of 'ecological research activities, communicating scientific findings in creative and novel ways to audiences much broader than the readership of our technical journals' (Ellison, et al. 180).

Now more than ever, assessing and representing the wicked problem of how humans are interfering in natural processes is work that must involve the collaboration of scientists and artists. With extinction denialism on the rise (Lees, et al.), visual artists and other creatives are needed to communicate the scope of the problem. In her *Birds Watching* series of installations, Jenny Kendler works with data from the National Audubon Society in the U.S. and conservation scientists from the Zoological Society of London to raise awareness of climate change effects on local bird populations. In recent iterations of this ongoing project, Kendler creates large reflective birds' eyes that seem to 'gaze back' at the viewer (fig. 2).

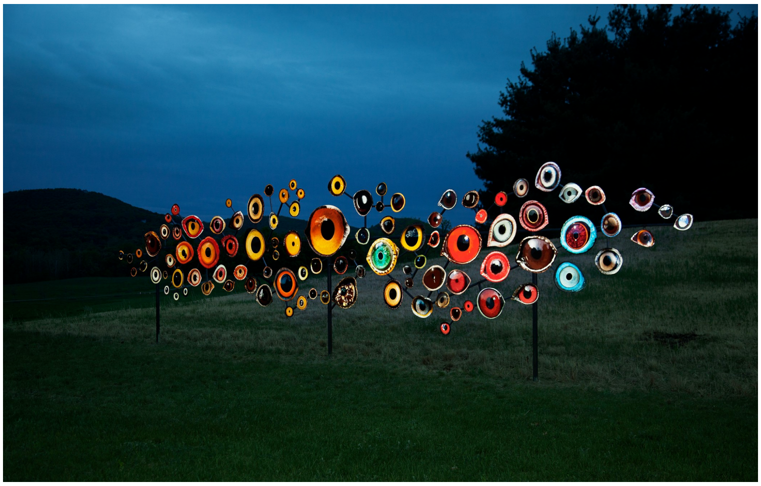


Fig. 2. Jenny Kendler, *Birds Watching I*, 2018.
https://jennykendler.com/section/466865-Birds%20Watching.html

Birds Watching reminds us that 'truly seeing' is a reciprocal act because it 'can be a first step towards practicing a renewed ethos of mutualism and care' (Kendler). Both artists and scientists understand the value of collaborating to raise awareness about the many ways in which human activities threaten species survival. Artist Mark Dion, for example, views these collaborative sites of cultural production as not only valuable, but necessary for:

> build[ing] a culture of nature that features regeneration over destruction, sustainability over depletion and nurturing over domination, it requires input from a diverse collation of thinkers, makers, and doers. Art is one of many areas which can be important to this constellation. (qtd. in Klein and Brosius)

One additional artist I'd like to mention here is Brandon Ballengée, a self-described biologist, artist and activist, whose work not only bridges disciplines in documenting species harmed by human activity, but also engages viewers affectively in embodied witnessing. In his most recent project, he has been investigating declines in amphibian and fish populations in the Gulf of Mexico as a result of the 2010 Deepwater Horizon oil spill. His 'eco-actions' in response to this anthropogenic biodiversity crisis emphasize the coordination of data on species populations recorded by citizen scientists in the region. In another project of his, *Frameworks of Absence*, Ballengée uses archival naturalistic illustrations depicting recently extinct bird, amphibian, reptile, and mammal species, excising images of animals from the illustrations and leaving only the backgrounds. With these works, viewers participate in a ceremonial response. While the artist privately 'cremates' the excised images of the creatures, placing their ashes into labelled containers, viewers are invited to scatter the ashes 'in the place where the species lived. This scattering of ashes is meant as an individual embodied experience for that person – meant to be a deep and transformative experience' (Higgins). Referring to these rituals as 'Actions of Mourning', Ballengée comments that '[r]eleasing the remains of others is a powerful and life-changing event, a reminder of our own mortality and the fragility of all life' (qtd. in Higgins). Like Maya Lin's interactive memorial *What Is Missing?*, Ballengée's projects involve people in the necessarily embodied witnessing of anthropogenic species loss.

The work of visual artists brings the challenges of representing biodiversity loss into view. How can we depict the disappearance of an entire category of beings? One way is to visualize their numbers. For example, in the World Wildlife Fund's award-winning 2008 billboard campaign 'Population by Pixel', the conservation organization used designs by Nami Hoshino, Yoshiyuki Mikami and Kazuhiro Mochizuki to depict four endangered species (the Cross River gorilla, Ethiopian wolf, Japanese golden eagle and giant panda); the more pixelated the image, the more endangered the species (fig. 3). This approach to visualizing vanishing species has since been emulated by others: the artist Josh Smith, who goes by JJSmooth44 on the image-sharing site Imgur, revisited the concept in 2019, creating pixelated images of additional endangered species (Foley), and developer Manish Basargekar created an interactive version of this data visualization that enables users to adjust the pixels over time, showing increases or declines in the species' population (Basargekar).

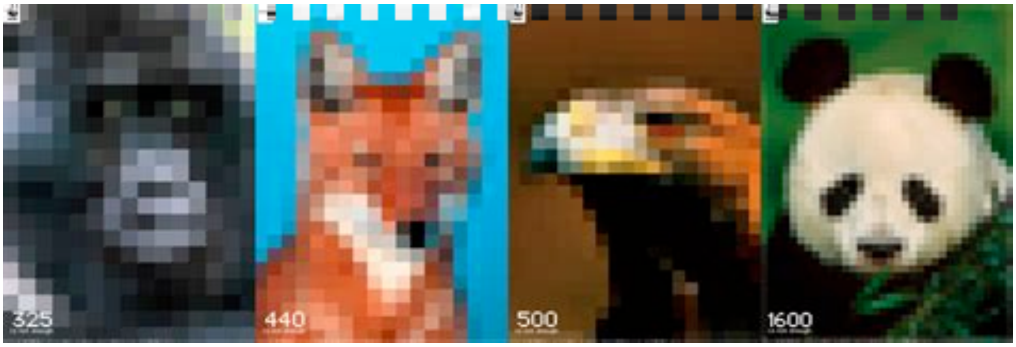


Fig. 3. Nami Hoshino, Yoshiyuki Mikami and Kazuhiro Mochizuki. 'Population by Pixel.' 2008. *The One Club for Creativity, https://www.oneclub.org/awards/theoneshow/-award/6984/population-by-pixel*

Representational practices striving to document global species decline are less than adequate yet nevertheless imperative because, in conservation biology, quantitative tracking (for example, as recorded in the IUCN Red List) will always yield only provisional results due to the complicated calculus involved in accounting for background extinction rates, relict populations, and species yet to be identified, among many other variables.[2] Measuring correlation and causation between human activity and species decline is in itself problematic. Meanwhile, representational practices among visual artists and authors engage with the problem of representing scale by leveraging the science of conservation biology to create works that span a wide range of affective registers. The emotional effects of such works matter variously, from simply encouraging people to bear witness to changing their behaviour. While raising awareness about the human impact on the environment is important, what's needed next is engagement and activation. Because the current mass extinction of species is largely human-driven, provoking a human response can move people to take action, from bearing witness to species in crisis to tracking the size and movement of species populations. Bearing witness isn't the ultimate goal in generative art pieces dedicated to enhancing our perspectives on the climate emergency, but it is a necessary precursor to mobilization. In this collective effort, I see a conundrum of scale, as well as an ethical issue: how can a phenomenon of such magnitude as global biodiversity loss, which is happening at this geological moment, be represented? What are the ethical imperatives involved in documenting anthropogenic losses at such a scale?

Tara: This concept of 'there's no going back' is central to these forms of cultural representation that are created at the intersection of art, activism and storytelling. Hanna Meretoja and Colin Davis state that it is now commonplace to view humans as 'storytelling animals' and emphasize the power of storytelling 'to unsettle dominant historical and political narratives by helping us to imagine alternative realities, possibilities, courses of action and orientations towards the future' (2). Narrative, they argue, is connected to power. Depicting a deeply fractured world, they locate intersectional, feminist, anticolonial, queer and ecocritical approaches to storytelling to disempower hegemonic narratives that 'marginalize experiences that do not fit white, male, heterosexual and anthropocentric normativity' (5). Emphasizing the power of narrative, they write, 'Storytelling is a process of world-making, and practices of remembering are not only about engaging with the past, but just as much about imagining and reinventing the world together with others' (7).

I was honoured to experience EvaMarie Lindahl's 'Multispecies Disharmony in the Landscape of the Walker Art Gallery' workshop in Liverpool, UK (2022) as part of her recently completed thesis, *Resistance Within the Museum Fauna – Challenging Anthropocentrism through Counter Art Histories and Non-Human Narratives.* The workshop invited participants to hear alternative narratives surrounding many of the historical and contemporary works in the Walker collection (fig. 4).

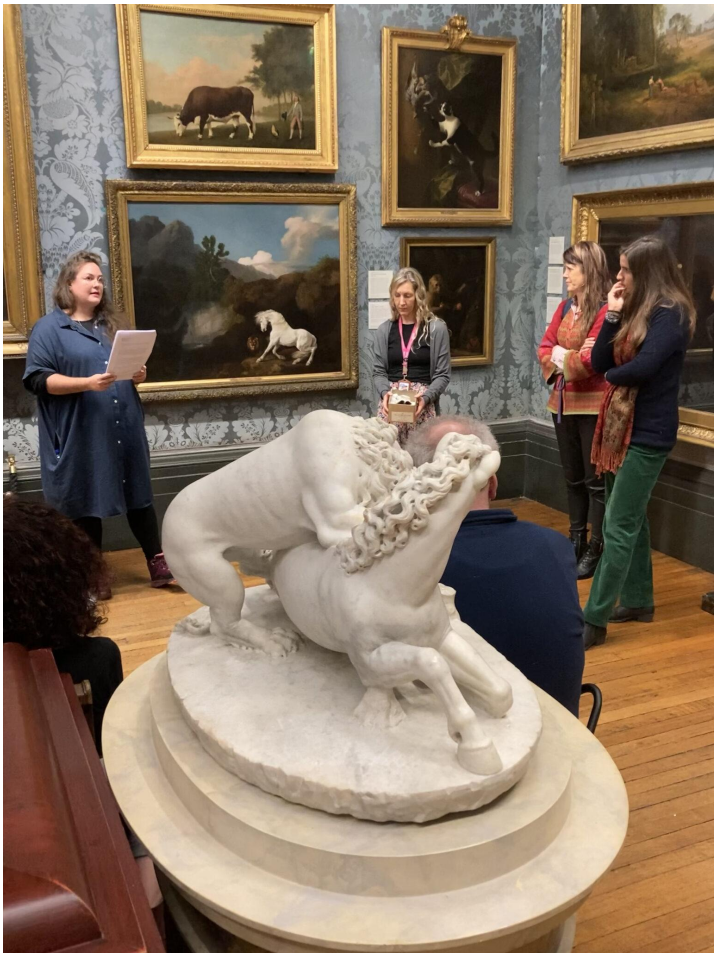


Fig. 4. EvaMarie Lindahl presented hidden more-than-human narratives as part of her *Multispecies Disharmony in the Landscapes* workshop at the Walker Art Gallery, UK (2022). Photo by Tara Nicholson.

Together, the group heard stories about the real-life treatment of the more-than-human animals found within several paintings and the extensive use of animal products hidden within their fabrication, including dyes, paints, lacquers and preservation materials. As a multispecies exercise, attendees were then asked to count the number of animals found in the gallery's paintings, sculptures and ceramics. In this dizzying exercise, hundreds of animals were quickly tallied (fig. 5), emphasizing the countless nonhuman narratives and the erased perspectives within art history. The afternoon concluded with participants creating short, nonhuman animal narratives that could represent a lived experience of one of the thousands of animals found within the collection. In situ, we heard inspired multispecies stories that demonstrated the power invoked by sharing these silenced perspectives and the collective desire to hear these voices. Lindahl's participatory workshops are documented in an online toolkit (Lindahl) that suggests further starting points for multispecies learning through the unpacking of contemporary and historical artworks.

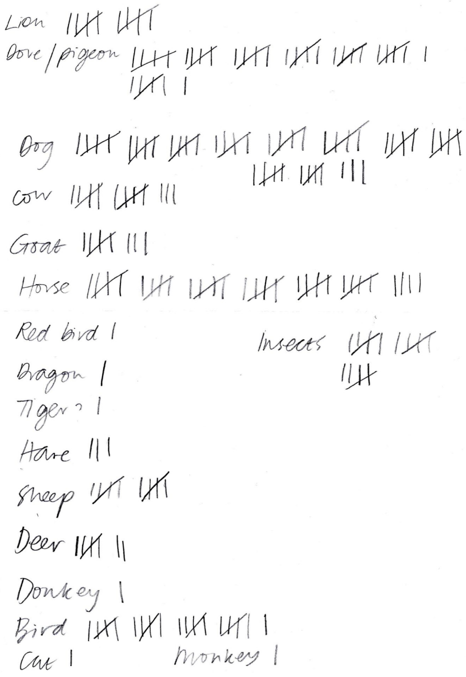

Lion
Dove/pigeon
Dog
Cow
Goat
Horse
Red bird
Dragon
Tiger?
Hare
Sheep
Deer
Donkey
Bird
Cat
Insects
Monkey

Fig. 5. A workshop participant's nonhuman animal tally (from Lindahl's website) created from the paintings, sculptures and ceramics within the Walker Art Gallery, Liverpool, UK (2022).

Tara: After experiencing EvaMarie's workshop and within the context of this discussion, I am drawn to the future possibilities of connecting these art historical workshops to address the current-day disappearance and extinction of nonhuman animals. How could similar forms of storytelling or art production be utilized to address extinction?

EvaMarie: Being part of this conversation has made me think of art history and art practice as a site of mass extinction. Not only because of the millions of nonhuman animals killed to become material, but because of the destruction of animal cultures through anthropocentric storytelling, practice and artworks. If we define mass extinction as more than the loss of physical bodies but entire animal cultures, how is art history and art practice destroying these cultures? And how can I, as an artist and teacher, obstruct these destructive forces as well as making animal cultures more visible?

One means of obstruction is the process of making them visible. When developing and trying out the toolkit in practice, with both art students and participants in the multispecies workshops, I was surprised by the emotional effect that counting and creating an inventory list of portrayed nonhuman animals had on the participants. When asked to count, one becomes aware of the hundreds of horses, dogs, and birds that one didn't see at first. Especially if the exercise of counting comes after experiencing a guided tour where the histories of portrayed nonhuman animals are in focus. Then the inventory list points to the fact that all these hundreds of animals have their stories too.

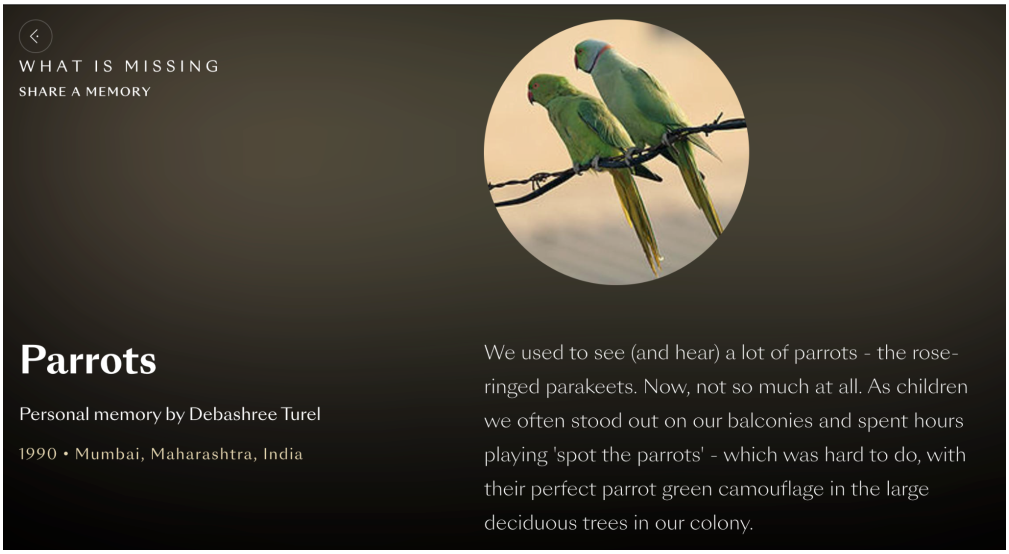
In *Why Look at Animals*, John Berger points out the similarities between the cages of the zoo and the frames at the museum. How the movements of the visitors at the zoo can be compared to the ones visiting the art museum, how they move from one tableau to another and another and another and another, but the inventory list changes the way we move. To count we must lean forward, get up close, stay long, and really study. Therefore, the counting of portrayed nonhuman animals at an art museum, and the creation of an inventory list, changes the way we experience the artworks, the way we move, the way we think, and the way we experience. If we can understand art history and practice as a site of ongoing mass extinction because of the way we kill nonhuman animals and silence nonhuman animal cultures in all layers of art production, one might ask: when did this erasure start? I have no idea. I just know that it is ongoing and that the traces of the practice of extinction can be found today, outside of the museum, as well as inside, within the frames of paintings from the eighteenth century. My current contribution to disrupting practices that have engendered the extinction crisis is to point to the cracks and facts, to the material and histories, where nonhuman animals are hidden and make them visible.

Stephanie: I've been working on a book project exploring the various ways conservation biologists, visual and performing artists, and academics in environmental humanities are trying to bring biodiversity loss into view. With a working title of *Anthropocene Extinction In and Out of View*, my book examines such sites of cultural production as the IUCN Red List of Endangered Species, memorials and other public events by groups such as Extinction Rebellion, and artworks by a wide range of artists – all of which function to encourage a collective witness to the biodiversity crisis. I'm interested in the challenges these projects face in addressing the categorical losses of entire species that is happening right now, in real-time. I start with the question 'what does an anthropogenic mass extinction of species in progress, a certain kind disappearing, look like?' The current mass extinction event, unlike the five that came before, is a uniquely unseeable phenomenon, I argue. It is unseeable for many reasons: because species is an abstract concept, because confirming the recent loss of an entire category of beings seems impossible, because not all species that exist have yet been identified and, of course, because it's hard to own up to the fact that human activity is what's driving these tremendous losses. Yet we have an ethical and existential obligation to witness these losses, each of them by species and all of them together.

Species death can be witnessed in many ways: by ceremonially ringing bells and reciting names, by telling stories and making images, by counting the not-yet-dead and forecasting their likely demise. These efforts to bring the mass extinction into view are highly iterative. It is as if we must authenticate the extinction phenomenon again and again in these various sites of cultural production to make the crisis believable.

Presenting absence becomes performative, confirming the scope of human influence through deliberate demonstration. This is a normative response that environmental humanities scholar Joanna Zylinska, in her *Minimal Ethics for the Anthropocene*, explains by insisting that discernment is not only a matter of adapting 'ways of co-existing and co-emerging with others', but also a matter of necessary reflecting and 'provid[ing] accounts' of that process (92). From citizen scientists conducting local species counts, to ecotourists visiting biodiversity 'hotspots', to artists making images of species fading and vanished, all kinds of people are witnessing – and documenting – the dwindling and the dead in all kinds of ways. Many times, these projects link up with larger conservation efforts to document biodiversity trends.

Artist Maya Lin's online memorial *What Is Missing?* invites visitors to bear witness to biodiversity loss by recording their memories of species abundance and thriving habitats, locating these memories on a map. The screenshot below of a post by a visitor in Mumbai is typical (fig. 6). In addition to the project's memorial aspect, the 'Conservation in Action' and 'Greenprint' sections offer visitors some solutions to the biodiversity crisis (Maya Lin Studio).



WHAT IS MISSING
SHARE A MEMORY

Parrots

Personal memory by Debashree Turel

1990 • Mumbai, Maharashtra, India

We used to see (and hear) a lot of parrots - the rose-ringed parakeets. Now, not so much at all. As children we often stood out on our balconies and spent hours playing 'spot the parrots' - which was hard to do, with their perfect parrot green camouflage in the large deciduous trees in our colony.

Fig.6. Debashree Turel. 'Parrots.' In *What is Missing?* Maya Lin Studio, 2010 - ongoing. https://www.mayalinstudio.com/memory-works/what-is-missing.

A certain urgency marks all these efforts: *Homo sapiens*, too, is a species with the potential to become extinct by our own hand. The anthropogenic mass extinction exemplifies the challenge presented to witnessing itself: an existential crisis implicating our own species; anthropogenic mass extinction is also a crisis of the archive. So not only do we face the loss of fellow species, our co-evolutionary contemporaries without whom we may no longer be able to tell certain stories about life on Earth, we must also contend with the risk of losing those eyewitnesses to mass extinction who saw, first-hand, the vanishing of species. The archive-makers too comprise the archive. Thus in the final chapter of my book, I note some projects indicative of this 'final' existential threat: 'time capsules' like artist Trevor Paglan's project *The Last Pictures*, a collection of images to be placed on a communications satellite in geosynchronous orbit around Earth, presumably long outlasting us, and speculative evolutionary accounts that attempt to dislodge our own species from the anthropocentrism that has gotten us into the biodiversity crisis in the first place. This, I think, is of utmost importance: to make every effort to see the collective impact of biodiversity decline, decentring the human.

Tara: With the rapid acceleration of species extinction, artworks that contain nonhuman animal representations may take on a darker context or even a new vocabulary. Do you think projects like the UK's Frozen Ark, other biobanks and even (de)extinction projects like George Church's Revive & Restore or Silicon Valley's Colossal, a biotech start-up to resurrect the mammoth, present new definitions of animal life? Especially as they are connected to and even profiting from the guilt and grief associated with mass extinction.

Stephanie: You had me at 'new vocabulary'! I recently taught a course on the 'rhetorics of the Anthropocene' in which my students and I tracked the neologisms associated with thinking about the geological human impact. Our hypothesis was that where neologisms emerge among overlapping discourses, some sort of paradigm shift is afoot. We determined that indeed the 'Anthropocene' constitutes a paradigm shift across the geological sciences, environmental humanities, economics, and even theology, reflecting the struggle among these discourse communities to come to terms with the global scale of anthropogenic impacts. The 'older' terms to describe this phenomenon, like 'industrial revolution', 'globalization', 'environmental stewardship', 'invasive species', 'domesticated species', etc. have become less useful in pinpointing what's going on and how we should proceed.

Lots of interesting new vocabulary is arising from our collective response to the biodiversity crisis, and I see these as linked to practical responses. The idea of a 'frozen ark' or 'frozen zoo', for example, is becoming more commonplace, another way we think about conservation. So yes, Nottingham University's Frozen Ark (similar to the Frozen Zoo project at the San Diego Zoo in California) links to the notion that we must conserve the genetic material of critically endangered species, which in the weird posterior thinking of the Anthropocene era have already become 'heritage species' before they have even become extinct. Historian and environmental Humanities scholar Dolly Jørgensen's term 'endling' has potency in thinking along these lines. As Jørgensen notes, 'endling' refers to the last surviving individual of a species, one that is typically held in captivity, like Martha, the last known passenger pigeon, who was exhibited at the Cincinnati Zoo. Again, we have a term that seems to consider a species as extinct before it fully has become so. Thom van Dooren articulates the 'dull edge of extinction', another term that, because of its metaphoric quality, lends itself to productive storytelling about possible new roles of humans in relation to the natural world. Of course, for an endling, 'functional extinction' has already occurred by the time it has become the sole survivor/endling. Considered together, the terms 'functional extinction' and 'endling' suggest the simultaneous affective and practical responses to species loss with which van Dooren is concerned. We grieve for the species in contemplating its endling individual, while we document its lost utility to ecosystems. Both ways of representing the species in question – one scientific, the other humanistic – are needed.

Tara: How can a more-than-human lens be applied to the study of art history or the production of art, and how can this lens challenge our re-tellings of art history? Through these re-countings, can a post-anthropocentric perspective emerge in connection to our understanding of contemporary mass extinction?

EvaMarie: Through several ways! Personally, as part of my doctoral thesis 'Resistance Within the Museum Fauna: Challenging Anthropocentrism through Counter Art Histories and Non-Human Narratives', I have written and performed counter-art histories with the intention of questioning the human-centered storytelling of the art museum.

The fauna of the art museum is not only the first part of the title of my doctoral thesis, but also a term that is developed because of the necessity to hold space for a group of nonhuman animals whose commonality is that their habitat is the art museum: some are seen in the open, named and portrayed in paintings, on display within frames and hanging on the walls of the museum. Many are hidden within artist materials when ground to become pigment, glue, and paint. Others are objectified as study material or leave traces of themselves as drawings in the archives. Their habitat, as well as their final resting place, is the art museum. They are the casualties of art production. But even though the art museum is a final resting place for many nonhuman animals, it is also a place that is full of life and histories that refuse and resist an anthropocentric narrative. The hoof of a horse, a cow resting, and the feathers of a parrot are drawn in charcoal and kept in remembrance in archives with perfect humidity and condition to last for hundreds of years. The varnish of the paintings is perfectly cared for. If we listen carefully, dare to imagine, and refuse to read the portrayed nonhuman animals symbolically, we can hear the fauna of the art museum calling through the cracks of the paintings and from the darkest tombs in the shape of museum archives.

All history, written by humans, is anthropocentric, simply because we cannot get around the fact that we read, interpret and imagine history through our personal experiences of manoeuvring through the world. If we recognize that we share these basic conditions with other species and refuse to read the portrayed nonhuman animals on display at art museums symbolically, we can use anthropomorphism as a radical tool to imagine a less human-centered art history. This includes the experiences of other species that critically investigate the consequences that art production has had, and still has, for individuals of other species.

When we use animals as metaphors, they lose their physical form in this world; their sounds and their stories disappear when turned into extras in the lives of humans. They 'lose their fur, the curve of their spine, the spines of their tongue' (Pattinson 96) and, according to Danielle Sands, 'we are responsible for rewriting anthropocentric histories' (95) if we want to create 'alternative cross-species futures' that are less violent towards nonhuman animals. This is the reason why, instead of being seen as a representation of human affairs and emotions, each painted individual that I investigate is treated as a once breathing individual with emotions, history and agency since an individual of another species is not 'merely a concept or a metaphor but, instead, a real, living and embodied person who requires our respect, support and solidarity' (Pedersen and Stanescu 263).

Historian Hilda Kean writes about the practice of the historian that 'we find material, often created in different times, with which to imagine a past and bring it alive in the present', hoping to recreate experiences that can 'validate past lives' (45). Throughout art history, the experiences of nonhuman animals have been silenced. As many CAS scholars have shown, silencing other animals happens in many ways: by pretending not to hear or understand other species, by refusing to take the biographies of nonhumans seriously, or by cutting the vocal cords of the many dogs used in medical experiments so that they cannot voice their resistance and pain. The oppressive practice of wilfully silencing nonhuman animals has contributed to the extinction of many species, including the passenger pigeon, the thylacine, and the white rhino. It is time to acknowledge that within the structures of art history, there are voices with agency (or perhaps vulnerability) that we, humans, didn't think were important enough to survive through time and history. Let us change that! Claire Parkinson tells us that 'the challenge is not in speaking but in listening' and that a 'conversation with another "speaking" mind has moral responsibilities' that can be 'costly in terms of normative human practices' (110). The practice of bringing forward a more-than-human art history is not about giving voice, it is about listening in such a way that 'interrogates place, power, and language' while being prepared to pass on that which we hear (Lockwood 169).

We need to do this work of listening because there are histories of violence within art production that need to be addressed and challenged to create new modes of thinking, imagining, and feeling art history. It is time to hear and act upon the wordless voices calling to us through the cracks of paintings and anthropocentric historiography. In our quest for a less anthropocentric art history, we need to enter the archives, museums, and other sites of research, to search for the fauna of the art museum while embracing a less self-centred anthropomorphism. Since anthropomorphism can be used in the commodification of non-human animals as well as a disruptive force against speciesism, Claire Parkinson suggests that anthropomorphism should be 'regarded as situational, contextual, differentiated and entangled' (30). When embracing the use of anthropomorphism as an entangled practice, it becomes clear that we as artists cannot automatically think of anthropomorphism as a 'good' practice, and not only analyse the emotional impact nonhuman animals used in art can have on its audience, but also the physical consequences to nonhuman animals when they, often forced, participate in the production of art. It is crucial, for us as artists, if we want to be part of changing the asymmetric power relations between species, to not only aim for the viewer to feel sympathy, but for an experience of anthropomorphism that can be a 'meaningful part of pursuing pragmatic empathetic connections' towards nonhumans throughout art history (Parkinson 115).

Tara: Connected to our discussion surrounding the representation of nonhuman narratives, I wanted to include mention to EvaMarie Lindahl's recent exhibition and its conclusions. Lindahl's *The Tyrant and the Muse* (fig. 7) visualizes nonhuman narratives and draws connections between the silencing of more-than-human stories and its inherent violence.

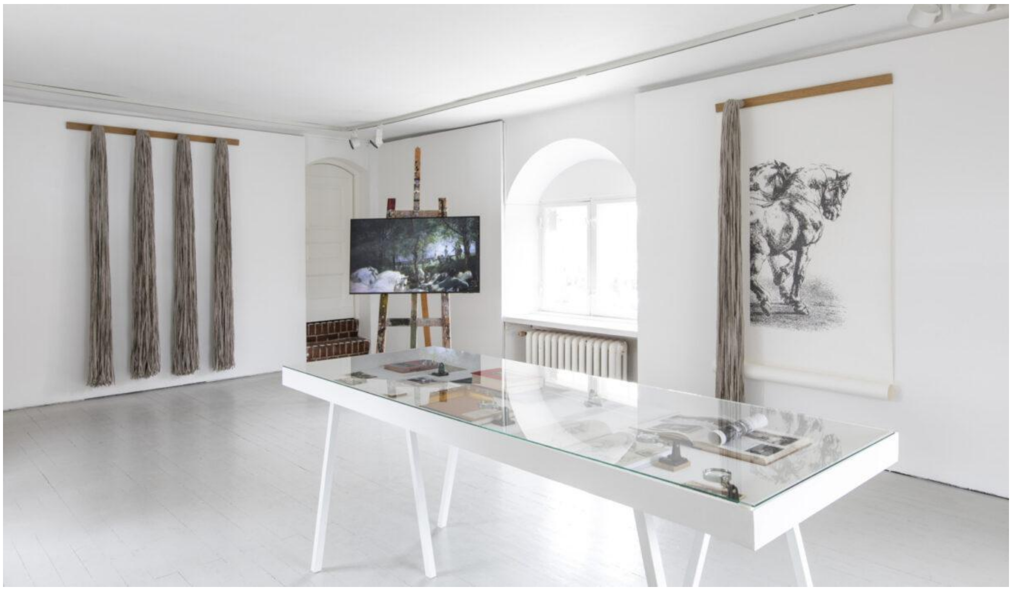


Fig. 7. EvaMarie Lindahl. *The Tyrant and the Muse*, 2023.

EvaMarie: *The Tyrant and the Muse* (2023) is an art project and an exhibition that evolves around Rosa Bonheur and the nonhuman animals that surround her and her art practice. The artworks, such as large-scale graphite drawings, video, and sculptures, were developed for an exhibition at Krognoshuset in Lund together with lectures, performances, and guided tours. For several years, I have been absorbed by the mid- and late-nineteenth-century French animal painter Rosa Bonheur. I have been fascinated by her choice of motifs, format, lifestyle, and the narrative that surrounds her persona. But above all, I am touched by her ability to portray personalities. The nonhuman animals she portrays do not function as representatives of an entire species, but rather individuals with feelings, experiences, agency, and it is their lives and stories that I want to investigate. How do they view the artist Bonheur? In a biography written by Anna Klumpke, Bonheur calls art a tyrant, an absorbent that demands her heart, brain, soul, and body. Art is her companion, someone who grants her freedom, but also dictates her life. She does not allow herself to be limited and refuses to agree to the conventions that require women to be submissive. It's made clear how much she loves the animals she surrounds herself with. And how much they, in turn, love and respect her –and this is where it gets really interesting. For the love of which Bonheur speaks is conditioned by art, that is, the tyrant, and therefore has fatal consequences for those depicted. The painting *The Horse Fair* (1852-1855) brought international attention to Bonheur. For two years, she studied horses at slaughterhouses and horse markets. To avoid harassment, she sought permission from the police to wear trousers so as not to stand out in the male-dominated environments in which she worked. The horses we see in the painting are studied while forced into slaughter or sold as commodities. It is men, with clenched fists, who rule the lives of these horses. Likewise, it is men and their doctrines that Bonheur fought against throughout her life.

Tara: This is a fascinating discussion intrinsically linked to the past and present, through the history of art and to the current-day production of art and culture. Are there specific cultural projects connected to extinction that are currently holding your attention? Or are there cross-disciplinary ways of working that connect science and art, that could extend to extinction studies?

Stephanie: The Svalbard Seed Vault is a similar project to the frozen zoo projects, and its significance for me is twofold: first, this preservation project targets plants, especially those of agricultural importance to humans, and second, in terms of location, the project is ironic in intentionally removing itself from human activity, namely global warming.

In contrast to seed and gamete freezing projects, de-extinction efforts strike me as rather perverse efforts to demarcate a species made extinct by human activity as though the very effort of reviving it would confer protection. Revive & Restore's language of 'genetic rescue' exemplifies this perspective. These projects intrigue me because they rely on highly specialized scientific and technical expertise while being decidedly influenced by entrepreneurial interests and an odd sort of ‘supply and demand’ orientation. Create a supply and presumably the demand will follow, all the more so considering the burden of guilt that could be eased by creating new populations of near-thylacines and almost-mammoths. Questions of authenticity abound in these projects, and they’re worth considering. I’d also like to know more about the downstream applications, other than bringing back extinct species, that are developing from these efforts.

Tara: During the summer of 2023, I visited the Svalbard Seed Bank and the University Centre (UNIS) in Longyearbyen, part of the Norwegian archipelago, in connection to my PhD field research. Initially there to document permafrost studies, I was transfixed by the countless paradoxes found within this rapidly changing northern region. Longyearbyen, known as the world’s largest, most northern, continuously populated town, is increasingly attracting a growing number of tourists, researchers, and seasonal workers as it transitions from a coal mining town into an international sightseeing and climate research destination.

Perhaps best described as a site of climate-disaster tourism, in Svalbard I met tourists and scientists alike who were drawn to experience its vanishing glaciers, polar bears and interconnected ecosystems found on the edge of extinction. Due to Svalbard’s location adjacent to a warming oceanic jet stream, polar ice melt, ice sheet collapse and permafrost erosion have been reported at a rate of four to six times faster than other landmasses on Earth. Often defined as Arctic amplification, the accelerating extinction of permafrost landscapes, the destruction of infrastructure including roads and architecture, and the vanishing of nonhuman animal habitats have positioned Svalbard as a ‘warming experiment’. The future-reality of climate crisis and its extraordinary effects on human and more-than-human ways of life are already playing out in real-time (fig.8).

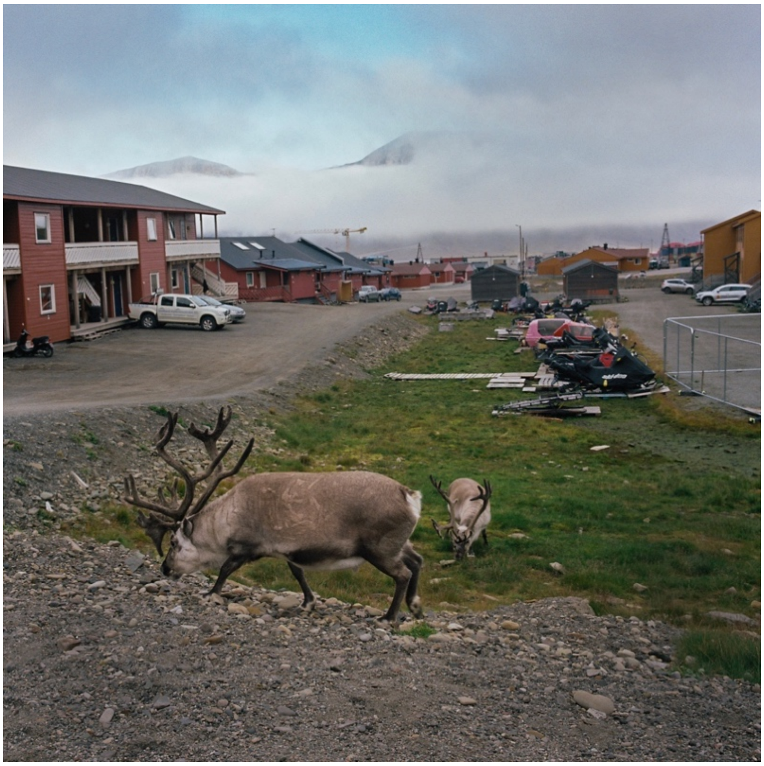


Fig. 8. Tara Nicholson, *Reindeer, Longyearbyen, Svalbard, Norway*, 2023.

This work expands from my past documentation of 'rockstar' scientists and the infrastructure surrounding Arctic climatology. In 2019, I photographed Pleistocene Park, a *Jurassic Park*-like rewilding experiment to reduce permafrost melt by transforming Arctic tundra into grassland by introducing large, grazing mammals (Beer, Christian, et al.). Founded by Sergey and Nikita Zimov, this project skirts the line between sci-fi and science while capitalizing the growing popularity of (de)extinction (fig. 9).

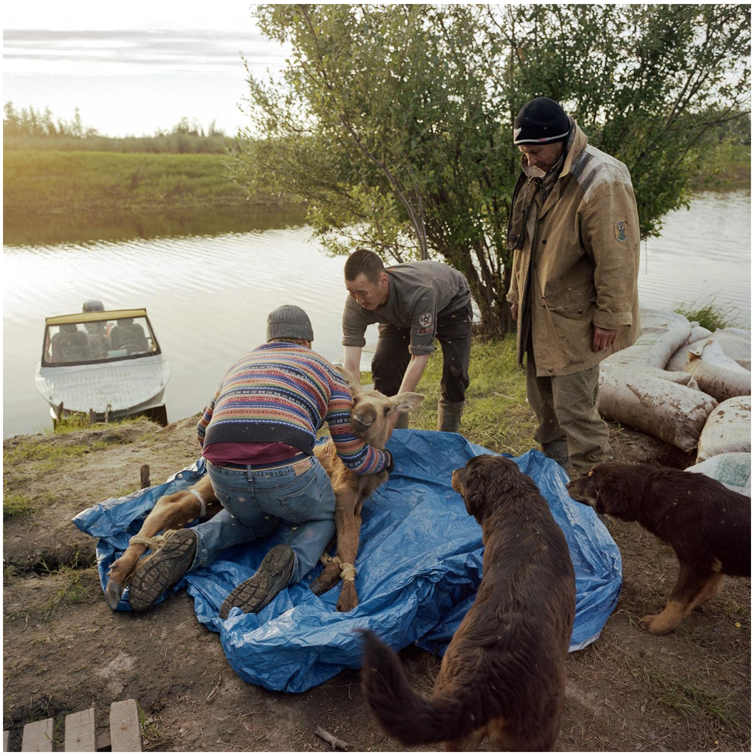


Fig. 9. Tara Nicholson, *Moose Rescue, Pleistocene Park, Yakutia, Russia*, 2019.

Through telling these stories, meaningful social change is put into view by increasing a dialogue between science and cultural production that better comprehends the profound social and cultural impacts of the sixth mass extinction. Equally, my work strives to be part of a growing body of knowledge that refuses the anthropocentric status quo treatment of nonhuman animals and nature and reveals the unacknowledged cruelty and mistreatment of other animals within (de)extinction studies, tourism, trophic rewilding and the overall codification of a species' way of life. By presenting a post-anthropocentric approach to Arctic extinction and permafrost studies, my work aims to question rewilding, breeding trials and more speculative (de)extinction schemes that involve gene-editing and vivisection through photographic documentation and studio production to re-imagine other possibilities for a warming Arctic.

To conclude, we must identify ways of thinking that prioritize nonhuman animals as agents in their own right. Examining cultural representations of nonhuman animals in visual art and in conservation science is a productive starting point. In large part, as Stephanie's and Tara's work indicates, artists and scientists must engage in the kinds of dialogue that reflect critically on human agendas with the natural world, especially our overreliance on the trope of 'stewardship' over the natural world that merely reiterates human priorities over the needs of nonhuman others. As Tara points out, a critique of some of the science-driven conservation projects intended to 'de-extinct' and 'rewild' certain species can help identify ways that such projects can perpetuate anthropocentric agendas. Equally important is EvaMarie's emphasis on more-than-human storytelling. Encouraging visitors to art museums and other sites of nonhuman animal representation to see with fresh eyes, her toolkit prompts viewers to locate and identify the nonhuman animals in these representations, imagine their embodied experience there, consider the violence they might be experiencing in that context, speculate on what is going on outside the frame of representation, and finally 'listen through the cracks' of the artwork for the voices of those nonhuman others testifying to human viewers of their own and equally valid experiences as storytellers. Through such praxis, we are able to tap into the 'animal cultures'. Finally, by paying closer attention to nonhuman experience in both visual art and scientific practices, as Stephanie argues, we may finally come to realize the permeable nature of 'species' in an age of the wicked problems of species decline and global warming. Doing so could lead us away from our tendency to erase nonhuman animals from human narratives, which devalues them, and instead help us recognize our interconnectedness within a more-than-human world.

Notes

[1] Morton prefers the term ‘global warming’ over ‘climate change’, which he considers a kind of ‘denialism’ of the problem (*Hyperobjects* 7-8).

[2] ‘Background extinction’ refers to species extinction due to evolutionary, as opposed to anthropogenic, processes. ‘Relict populations’ are small groups of once-abundant species living in a restricted area.

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