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Sightings

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A photograph of a Yangtze River dolphin, commonly known as the baiji, was printed in one of my textbooks when I was a pupil in Dalian, China. I remember staring at a small white back submerged in a tideless pool. It was 2007, and our teacher informed us that the animal we were looking at was near extinction. The last known baiji had died in captivity five years prior. When I saw the photograph, I did not realize I was looking at a ghost—not just of an individual animal, but of an entire species.

In the wake of China's post-1978 economic reforms and the combined pressures of land reclamation, dynamite fishing, and the construction of the Three Gorges Dam (undertaken between 1994 and 2006), fewer than one hundred baijis remained at the turn of the century. In 2006, after surveying three thousand kilometers of the river for thirty-eight days, an international team of researchers and journalists declared the Yangtze River dolphin "functionally extinct."[1] It was the first large aquatic mammal to officially go extinct since the 1950s, when overfishing and hunting led to the disappearance of the Caribbean monk seal.

I have little memory of this original photograph. Roland Barthes famously refused to show a treasured photograph of his late mother in front of a winter garden, fearing the erosion of personal truth by the solvent of reason. In the same fashion, I will not attempt to show you that early-2000s photo of the baiji. Even if I wanted to, I couldn't. Since it has been reproduced so many times in various textbooks across China's mandated curriculum, I can no longer identify the original photograph. Yet I know I saw it; it exists for me. My memory still holds in its grasp a small white shape.

Xinhua Net News. The extinction of the baiji dolphin in the wild has not yet been confirmed. 2018

Many years after its declared extinction, I encountered the baiji again.

To be clear, it was not the living animal that I saw again, but certain contours that suggested its appearance. It happened while I was working on my doctoral thesis in England. Bent over a library desk, I was reading some papers. One of them listed the baiji as one of ten animals extinguished in the twenty-first century. Reading the name "baiji" there, far away from home, stirred a faint sense of recognition. I entered its name into a search engine and out came a photograph (above) from *Xinhua Net*, one of China's most authoritative news agencies, which published the image as evidence of the baiji's alleged return. Return? I gawked at the absurdity of the supposed "animal" captured in the photograph. I did not realize the baiji had been so far gone that it could be mistaken for an ambiguous dot.

This second "photograph of the baiji" introduced me to the phenomenon of "ghost species," which nature writer Robert MacFarlane describes as "an evolutionary concept that entered conservation science in the mid-1980s." A "ghost," he explains, "is a species that has been out-evolved by its environment, such that, while it continues to exist, it has little prospect

of avoiding extinction. Ghosts endure only in what conservation scientists call 'non-viable populations.' They are the last of their lines."[2]

Literary scholar Ursula K. Heise further defines the phenomenon as a sighting of a near-extinct species, decades after its disappearance, that cannot be scientifically confirmed.[3] Famous examples include the ivory-billed woodpecker, the Miss Waldron's red colobus, and the Japanese wolf. A ghost species is a creature in limbo: as its habitat becomes increasingly impoverished, its numbers dwindle. With the exact date of its extinction unconfirmed, it dips in and out of sight as blurry outlines and silhouettes, as breathy ripples that break the water, as sounds that follow somebody walking home alone at night.

A particular philosophical thinking stemming from Jacques Derrida calls into question the nature of ghosts and their relationship with the corporeal. Environmental philosopher Frédéric Neyrat reworks the Derridean term "revenant," which he understands as "one who comes by coming back" (*il commence par revenir*), to suggest that ghosts assume a real body—a history a priori.[4] For a ghost to come back, it must have first lived. Following this logic, a ghost species is an animal or plant that existed but was later erased by human activity. This distinguishes it from fantastical creatures such as Bigfoot, mermaids, or the Loch Ness monster. I am speaking here of true ecological ghosts of human making.

What are the philosophical implications of such a haunting phenomenon? I aim to delineate a politics of ghost species by analyzing how such spectral creatures enter visual culture through the framework of ecological grief. First, a few questions: What makes a species ghostly? What gets to come back, and who sees such revenants? What constitutes *conditional apparition*? Later, I discuss the possibility of ethically coexisting with a dying natural world. Not only are we haunted by extinction and the ghost species that it produces. We are also constantly watched over by ecological ghosts.

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Images of the baiji led me to an online discussion forum on Baidu (China's biggest search engine), where people lamented the passing of the animal by posting news articles, writing sincere but bad poems, and sharing photographs they took of possible sightings. Many of them are fuzzier than the one published by *Xinhua Net*. Even with all the recent advances in photographic technology, people cannot seem to zoom in far enough or hold the camera steady enough to capture anything definitive.

"Trail camera photos taken within 50 m of one another on November 30, 2019 (top), and October 1, 2021 (bottom), of apparent Ivory-billed Woodpeckers showing a prominent white saddle present on the lower part of the folded wings." Steven C. Latta, et al. Multiple Lines of Evidence Indicate Survival of the Ivory-Billed Woodpecker in Louisiana. BioRxiv, 8 April 2022

The lure of ghostly photographs does not only exist in the realm of wistful citizen science. The photograph above was published in a peer-reviewed journal in 2022, where the ecologists stated that "while the image quality is too poor for precise measurement, the relatively long neck aspect ratio, proposed as characteristic of the Ivorybill, is … highly suggestive."[5] In the

first few decades of the twentieth century, deforestation and hunting decimated the population of ivory-billed woodpeckers in the US South. While the last scientifically accepted ivory-billed woodpecker sighting was in 1944, there have been multiple unofficial ones since.

It seems to me that animals being deprived of a world makes for a world of deprived images. While the animals are driven out of sight, the images of their posthumous existence behave like a particular kind of *poor image*, described by Hito Steyerl as "a lumpen proletarian in the class society of appearances."[6] While in Steyerl's conceptualization an out-of-focus image is of lower exchange value, the images by which I am bewitched, though abstracted and deteriorated, make way for an advancement of the imagination and even, perhaps, of science.

Yet the sense of conservational hope that underlines the circulation of these less-than-convincing images is a force that cannot withstand close inspection. A clear image would do much more to confirm a species' existence, yet in the absence of such an image, blurry ones demonstrate how a half-seeing optimism can triumph over empiricism. In a way, a ghost species is only alive insofar as the images of it remain poor. This makes the experience of glimpsing near-extinct animals a bit like peeking through your fingers at a horror film. It is as if a ghost species is something naturalists want to see, but not too clearly.

In previous epochs, mass extinction events dealt death to earthlings in often sudden and unexpected ways, from super-volcanos to asteroids. In the much-contended "Anthropocene," where humanity has become a geological force to be reckoned with, the disappearance of species happens on a large scale but is also eerily unnoticed. For instance, despite being the tallest mammal on earth, giraffes are undergoing a "silent extinction" and disappearing from plain sight.[7] As cultural geographers Shane McCorristine, William M. Adams, and Adam Searle explain, the disappearance of species in the twenty-first century is always apparitional.[8] Rather than constituting an absolute erasure, their disappearance remains unconfirmed. Meanwhile, photographs—and other potential evidence of life against all odds—draw us into emotional relationships with their subjects. To me, images of possibly extinct species—their unclear, unidentifiable vagueness—are akin to Barthes's notion of *punctum*: the painful details that prick and wound.[9] Not the whole, the clear, the ultra-high-definition images that populate wildlife photography contests. A blurry image of a ghost species speaks to the violence the natural world endures. Pushed to the periphery, their representation degrades. The blunt pain of unavowed and inarticulable violence.

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When extinction manifests as apparitional, sightings of ghost species are a phenomenon of conditional apparition. Geographical specificity plays a determining role in when a species turns from an inhabitant of an ecosystem to its ghost. Ghost species are often loyal to their now-empty abodes. As McCorristine and Adams note, extinct species "are commonly located and/or mourned in space," meaning that ghost species, like all other beings who haunt, can be site-bound.[10] "Ghosts are also terribly specific," proffers environmental sociologist Michael Mayerfeld Bell, who understands ghosts as "the sense of the presence of those who are not physically there."[11] In Bell's view, people have inhabited places that seem to be charged with historically significant signs, even though one might not be able to immediately name them.

Still from *The Haunted*, 2017. Courtesy Saodat Ismailova.

Ghosts can help us develop a language to enunciate the felt knowledge of a place, to reconstruct a narrative of the landscape based on its recent history. For example, artist Saodat Ismailova chose *The Haunted* as the title for her 2017 short film about the extinct Turan tiger, an animal that people across Central Asia had held sacred for centuries. In the late nineteenth century, the Russian colonization of Uzbekistan inaugurated a prolonged period of ecological loss. Gradually, once-thriving animals were driven out of sight. Ismailova's camera surveys the contemporary landscape of Uzbekistan, looking for and maybe hoping to locate shadows of the tiger. The artist says she arrived at this vision by collecting dreams from villagers who live along the

Amu Darya river, decades after the tiger's disappearance. She was surprised to hear how often the tiger *visits* people's dreams as a guardian. "In conversations about this lost species," relays Ismailova, the Turan tiger "turned out to symbolize a loss of spirituality, of traditions, of respect for nature."[12]

When a species goes extinct, gone with it are languages, local traditions, customs, and entire ecosystems. By 2002, when the ʻalalā , once a prominent native species of Hawaiian corvid, disappeared from the wild, other species with whom it was biochemically enmeshed also dwindled. As environmental philosopher Thom van Dooren poignantly observes, these are deaths by association, whereby "coevolution can switch over into coextinction, co-becoming into entangled patterns of dying-with."[13]

Loss is relational. A person who is unfamiliar with a particular place's flora and fauna is unlikely to see an apparition; again, the revenant prefigures a body in time. Yet the loss is immense for those who recognize what has been lost. Still, some are at a loss to understand an absence that is so poignant for others. Ghosts can thus prevent the prevalence of "shifting baseline syndrome," which is, as zoologist Samuel Turvey (who also participated in the 2006 Yangtze expedition in search of the baiji) explains, "a social phenomenon whereby communities can forget about changes to the state of the environment during the recent past."[14]

If seeing a species all the time can still prevent us from seeing them at all (in the case of "silent extinction"), what of the living species all around us that we do not see? What of those that are *not* considered charismatic, that are raised to be slaughtered or kept as human's best friends: the "mundane," the "domestic," or the "ugly," the "cunning," the "toxic," the "repulsive"? Can we grieve for their suffering at all? Should we?

Not all life is grieved, let alone grievable. Ghost species open toward a particular politics of seeing. They highlight the posthumous lives we choose to see, as well as the ones for whom certain people have developed a selective blindness. In foregrounding the concept of "ungrievability" within a psychoanalytic and philosophical approach to grief, Judith Butler asserts that certain lives and communities—such as the state's enemies, nonhumans, racial and sexual minorities—are rendered unworthy of public grief.[15] By robbing lost lives of grievability, the state—or any other entity invested in killing—sanctifies and perpetuates the violence against them. In the face of "everyday ecocide and toxic dwellings," environmental humanities scholars Owain Jones, Kate Rigby, and Linda Williams conclude that "there is not yet a commensurate relationship between the severity of the crisis we are facing and the collective (societal) anger and grief being expressed."[16]

Let me hypothesize that it is a *lack* of mourning that conjures ghost species' apparition. In the same vein, writes Neyrat, "We know that every ghost story is about justice: specters come back because they consider that something unjust happened that was not recognized as such, the unjust event preventing them from resting in place."[17] An untimely death—that is, an unmourned, unjust death—brings a ghost species into view. Borrowing from *Hamlet,* Derrida speculates that specters arrive where time is "out of joint."[18] A ghost arrives *late*: it both takes place after the expected time, and is something no longer alive. When species are being wiped out at an unprecedented rate, some cling to existence in fissures of time. Perhaps not as an identifiable whole, but as elusive fragments; over time, they become myths, dreams, and collective memories that can sometimes outlive a place. Torn. Whole. Gone. Not gone. Maybe. While some may still be living, they are considered dead; while some have most certainly died off, they "come back" to live.

If it is true that wildlife populations have plummeted by 69 percent in the past fifty years, how come only a handful of the animals become ghosts, and come back?[19]

If only certain lives can be grieved, could there exist a hierarchy amongst ghosts?

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Xinyue Liu, Finless Porpoise, 2023. Courtesy of Xinyue Liu.

In July 2023, I took a field trip to the Institute of Hydrobiology in Wuhan. I wanted to visit the dwelling place of Qiqi, the last known living baiji. Twenty years after Qiqi's death, the pool where he resided, shown in the photograph above, is now occupied by two finless porpoises. The latter species has also taken the baiji's former place on the list of "World's Most Endangered Animals." It was the finless porpoises' breeding season when I visited. I was not allowed near the pool. As I stood outside, looking in through two glass doors, I took this photograph when one porpoise came up for air. The conservationist 彭博炜 (Bowei Peng), who accompanied me, indulged my obsessive picture-taking, telling me that it was customary practice amongst the center's visitors. I thought about how urgent my sightseer's actions must have seemed, how desperate; each photograph felt like it could be the last. But I did not wish to take the last photograph. In fact, I was afraid that what I was producing would become an afterimage, an image that accidentally confirms a loss while trying to describe it. But perhaps all images are afterimages. Barthes suggests that a photographic image is a closed field of forces; when a thing is photographed, it transforms from a subject into an object. This means that each release of the shutter brings on a micro-death, a becoming-specter of the photographed. Barthes, accusatorily: "All those young photographers who are at work in the world, determined upon the capture of actuality, do not know that they are agents of Death."[20]

When people, armed with a camera, track traces of near-extinct animals for months and even decades, I am inclined to think they are attempting to let live.

That the shifting baseline syndrome exists as a phenomenon implies that even ghosts cannot persist forever. Over time, the apparition ceases. Observing how quickly one extinct species competes to replace another in popular media, environmental historian Hugo Reinert laments:

> Something strange happens, however, in the junctures: at every scale … specific death is constantly subsumed and rendered meaningful in terms of a higher-order disappearance that is still in process

> … The hopeful character of this transformative erasure is perfectly encapsulated, in the case of Imre, by an article headline penned the year after his death by three of the principal actors involved with the species: "Imre is dead—Long live the Lesser White-fronted Goose."[21]

Animals can thus die a double death—a compounding event induced by the ever-escalating scale of ecological crisis. As catastrophes pile on, the circulation of death and its images becomes more and more prevalent, making each individual death a blurrier event. Reinert suggests something truly sinister: that we are stuck in a vicious cycle of continuous death-in-progress. Through each iteration, each death is subsumed, replayed, losing its individual significance.

Someone in the baiji discussion forum points out a mistake in their biology textbook, which was published in 2019. The animal in a photograph accompanying a passage on the conservation of the baiji … was not the baiji. It was not even a finless porpoise.

Almost in counterpoint to Reinert, McCorristine and Adams conclude that "the field of conservation reflects the *power* of ghosts, haunting and absence in framing the crisis of biodiversity."[22] While I have made the case for photographic artefacts serving as a counter-memory that acts in disobedient ways, I still wish to contend with the idea that the ghost as a concept has a certain usefulness, to hopefully give this idea some nuance. The narrative of ghost species *can* lend itself to empirical actions and conceptual development, but this is not a straightforward process. Ironically, near-extinct species, their existence unconfirmed, still need to *work* posthumously. I argue that we should not ask these ghosts to perform our labor for us. *Pace* van Dooren, the dead ought not always be "put to work."[23] It is us who should be *led to work* by the dead. It is we who made possible their deaths. It is we, therefore—and I am speaking here as an artist—who need to be advocates for ecological ghosts, to make their conditional apparition worthwhile.

Anthropologist John Knight, who spent the 1980s studying the Japanese wolf (another ghost species), writes that tales about exchanges between humans and other animals can be understood in the first instance as a kind of "social instruction."[24] I am fond of the idea of receiving orders from ecological ghosts, of taking these ghosts seriously as an ordering irrationality. In leading us to work, the ghosts themselves are rid of the burden to change, and the responsibility is shifted to humans: I act in your stead. I become your eye for vengeance. Something is out of place. Something to which we had developed a profound attachment is now gone and unmourned. The revenant comes back but cannot find its body. What on earth has happened?

Barthes again: "So that is how I must name the attraction which makes it exist: an animation. The photograph itself is in no way animated, but it animates me: this is what creates every adventure."[25]

If I had not seen the newspaper article with the terrible fuzzy image of the baiji, I would not be writing this today. Perhaps I was sent on a little adventure by the baiji.

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In many cultures, ghosts instill a visceral sense of horror. We fear that a returned spirit brings with it revenge and fury. 张先锋 (Xianfeng Zhang), a leading biologist and conservationist at the Wuhan Institute of Hydrobiology, told me that before brutal fishing practices killed most of the baiji, the villagers along the river almost never intentionally harmed them. The word he used was "敬畏," which translates to "fear" and "respect." Known as the Goddess of the River, the baiji once represented an inviolable deity. Some environmental scholars have flagged fear as a negative trait when it comes to conservation efforts, arguing that this emotion can demoralize us into inaction, further threatening the survival chances of a species.[26] I would argue, though, that in the absence of fear and respect for nature as an unknowable entity, humanity has striven towards a hubristic domination over it.

In contrast, a sense of acting in the world as if being watched by omnipresent beings brings to mind Derrida's concept of the "visor effect." We do not always see that which is looking at us, suggests Derrida.[27] This looking back from the other side is as metaphorical as it is physical. While victims of ecocide are out there as a felt presence that is not immediately visible, we are certainly not the only beings capable of perceiving, sensing, and looking.

Seeing is fundamentally a political act. In John Berger's essay *Why Look at Animals?*, the ultimate consequence of animals' marginalization is that the "look between animal and man, which may have played a crucial role in the development of human society, and with which, in any case, all men had always lived until less than a century ago, has been extinguished." To put it more simply, the "fact that they can observe us has lost all significance."[28] It is easy to forget that when we see the ghost, the ghost sees us too. When wilderness is pushed to the brink, it is increasingly difficult to feel the gaze from more-than-human others upon us.

Learning to see ghosts also implies learning to be seen by them. This type of learning, I am aware, must be brought on by systemic and structural changes. The error of not seeing ghosts, or not seeing their gaze, is a result of human civilization displacing nature, isolating it further and replacing it with museum taxidermies and screen images that can be looked at but

cannot necessarily return our gaze. Without the dismantling of the internal combustion engines and animal husbandry that turn ecological places into manageable territories, humans will continue to be alienated from the natural world. More-than-human gazes disappear as wild places that hide them evaporate.

Jenny Kendler, *Birds Watching III*, 2023, installed in "Dear Earth" at the Hayward Gallery. Courtesy of Xinyue Liu.

Artist and environmental activist Jenny Kendler, whose works often encourage empathy with the natural world, employs this idea of nature looking back at us. Her installation *Birds Watching III* features the eyes of one hundred bird species that are threatened by the climate crisis. To mimic the glowing quality of a bird's retina, these eyes are made with a reflective material used in traffic signs. By projecting enlarged symbols of extinct species' gazes back onto public space, the artist creates a sense of urgency generated by the watchful eyes of the other.

So far I have embraced Barthes's *Camera Lucia* without criticizing the subjective, if not solipsistic, gaze he pores over his collection of photographs. Yet it is imperative, when using the Barthian framework to read a photograph, to acknowledge and unmoor the gaze from its French metropolitan harbor. Importantly, as Stanley Wolukau-Wanambwa has noted, Barthes's gaze was stubbornly rooted in his "white male universality" and was at times ignorantly unaware of the sovereignty of the enslaved Africans whose photographs he scrutinized. Wolukau-Wanambwa writes:

> Throughout *Camera Lucida*, Barthes summons the images of people so that they might sit wordlessly on the page, subsumed by his own history, subservient to the necessities of his grief, salient by virtue of their error or deformity, useful as instantiations of grand abstractions, either mythic or mundane, but wholly without speech*: sans parole*. Faced with Avedon's portrait of William Casby (a formerly enslaved person), Barthes is incapable of asking, much less of imagining (as he did of Napoleon's youngest brother, Jerome, at the outset of the book): What might his eyes have seen?[29]

This criticism also rings true in the context of ecological loss. More-than-human species are traditionally considered *sans parole*. The conviction that nature is mute and passive is of course false. Yet it is still easy to speak in nature's stead, to confuse its stillness with inaction. It is my last intention to drown out the history of more-than-human nature, to make it subservient to the necessities of my grief. Wolukau-Wanambwa warns us against the selfish fetishization of images of the other. To break away from that, his critique implies, is to ask insistently: *What might their eyes have seen?* Would we still be this complacent if we could see their eyes as we maim and kill them?

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Let us consider the possibility of being animated by ghosts toward justice, *spectral* justice—propelled by those who suffer, who can be felt but who might not actually be there. This way of being led by ghosts transforms a person into a vessel for myriad forms of life. In an ethnographic account from the Kumaon region of Uttarakhand, India, anthropologist Radhika Govindrajan demonstrates what spectral justice could make manifest. After following a resident who believes that her recently deceased bull has returned in the form of a ghost who will not let her sleep until justice is done, Govindrajan writes that

spectral justice is "fuelled by the grievances of ghosts who … refuse to be buried and insist on mattering."[30] Justice must be delivered not only for those who have been driven out of their land, but also for those whose bodies continue to be occupied by ghosts—those for whom ecological grief is not only prevalent but persistent. Those who are led by ghosts are unable to call it quits. Let our hearts *be* troubled, always.

To take ecological ghosts seriously can also change the way we think about grief. In much of the relevant literature, grief is thought of as the injury of the self as it is extended to others. One cannot grieve for whom one does not know. Philosopher Michael Cholbi even argues that grief is "fundamentally self-focused," and that "we do not grieve all deaths, nor (I contend) ought we grieve all deaths."[31] Sightings of spectral animals led me to think about the possibility of grieving for strangers and anonymous others we do not know and will not know. Is it not reductive to pay attention to others only when injustices are made visible—summarized, somehow, by a few photographs? Is it possible to desire care for others *regardless* of their invisibility and alienness to us? For philosopher Emmanuel Lévinas, "this desire is not a desire for the invisible to be made visible but to remain invisible."[32] Can we care for more than just the more-than-human creatures familiar to human beings, the ones who own names, the ones most threatened by extinction? Countless other beings continue to exist but are not seen by us: the not-so-charismatic animal and plant lives, the creatures with whom we might have difficulty forming personal attachments, the anonymous "low-hierarchy" ghosts that still matter.

The persistence of receiving the others' gaze is a political position I wish to occupy. I do not wish to collapse someone's history into my grief; rather, my grief forces me to remain turned towards beings whose lives are diminished as a consequence of human "progress." Against Barthes's photograph—"my photograph [is] without culture: when it is painful, nothing in it can transform grief into mourning"—my analysis aims to restore images *with* culture and history.[33] That restoration allows for mourning to take place. Ghost species, the abhorrent wrinkles and tears in an otherwise smooth fabric of everyday ecocide, instruct us to look at an increasingly damaged world: look now, look at my fragmented body, this ghostly form, my images without me.

I owe much to theorist Rebekah Simcha Otto, whose work on Black hauntologies poses an important question: "How can we witness, remember, honor, and bury our dead while maintaining the stamina of ghosts?"[34] When even the vanishing vanishes, we must maintain the stamina of ghosts in order to remain turned towards others, to create the conditions that render their gaze a possibility. Further, spectral justice demands that we not only right historical crimes but also prevent future wrongs. Precisely because capitalism and industry have disappeared and are disappearing animals, habitats, and landscapes, we must treat lives (here I mean both more-than-humans and humans, whose well-being remains tethered to earth) as vanishable. That is to say: we ought to fear and respect ghosts in the present tense as well as the ghosts-yet-to-come. To learn to live with ghosts is to finally learn to live (*apprendre à vivre enfin*) as if we are being watched all the time. Because we are.

Notes

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