**Nonviolent Engagement with Wildlife as a Hope Building Practice**

Debbie Philp

Ecology, Spirituality and Religion, California Institute of Integral Studies

PAR-6480-01: Reality and the Heart: Eco-Emotions in the Anthropocene

Rachael Vaughan

December 15, 2023

Uncertainty created by the global crises of climate change, environmental degradation, and biodiversity loss creates anxiety and challenges one's ability to feel hopeful and to act to mitigate or solve those crises. Nonviolent interactions with wildlife may contribute to building the constructive hope required to address those global crises. Studies of human engagement with nature provide evidence of the human mental and spiritual health benefits of nature connectedness and the building of compassionate attitudes that motivate caring actions. Although historical interactions with wildlife have tended to be violent, changes in the science and public perception of wildlife are shifting wildlife management practices towards coexistence and opportunities for nonviolent engagement with wildlife are increasing. There are spiritual practices that encourage compassionate interactions with wildlife.

Although the role of hope in addressing the climate, environmental, and extinction crises is debated, the very uncertainty around those crises may be one of the factors that cultivates constructive hope. When framed by the Reasonable Person Model (Li & Monroe, 2019), beliefs cultivated while interacting with nature are seen as key drivers of hope, which in turn motivates actions for and around wildlife that both mitigate climate change causes and effects and deepen the sense of connectedness. Providing opportunities for engagement that are safe for humans and wildlife may turn out to be an essential part of addressing the Earth's crises.

## Hope Begins in Connectedness

One morning, I was sitting outside in the snow with my legs extended, gazing softly at a bit of evergreen fern that stuck out of the snow. I had tossed some nuts out for whoever wanted them. Now I was sitting quietly, meditating. I caught the red squirrel's approach in my peripheral vision, but expected him to run by, as usual. The grey squirrels are friendlier; most of the grey squirrels in the area are either orphans raised by me or descendants of them. The red squirrels are

aloof and appropriately cautious about getting too close to a human. Therefore, I was surprised when, instead of running past me, this red squirrel approached, put one front paw on my leg, and looked me in the eye.

The red squirrel only stayed for a moment, but the brief interaction shifted my mood more than the time I spent meditating. Studies (Richardson et al., 2018; Russell et al., 2013; Ward-Smith et al., 2020) have demonstrated the mental and emotional health benefits of human engagement with nature. I had just experienced one mode of engagement: a direct, physical, multisensory interaction.

My experience with the red squirrel called up what ecologist and philosopher David Abram calls "perceptual reciprocity," the sensation of both touching and being touched by another being (1996). Such interactions draw humans into nature; rather than a cold, experimental approach to discovering what nature feels like, one experiences being reached out for and being felt by nature. The reciprocity and relationality of the interaction was echoed by Andreas Weber in *Matter and Desire: An Erotic Ecology*:

> This world is not populated by singular, autonomous, sovereign beings. It comprises a constantly oscillating network of dynamic interactions…The relationship counts, not the substance. And to make this relationship possible, it is necessary that the two sides touch each other… (2017, p. 22).

Although interactions between humans and wildlife must, if intended to be nonviolent, infrequently involve the physical act of touching, reciprocal engagement with the other physical senses, such as eye contact, should be sufficient to create nature connectedness.

To cultivate well-being, for humans and more-than-human animals alike, nature connectedness is important. Well-being is a complex concept that may best be understood by the

dimensions that make it up, including physical, mental, and spiritual health, a sense of security and capability, and feeling inspired and connected (Russell et al., 2013). A large-scale campaign called “30 Days Wild” asked participants to engage with nature every day for a month. During and after the study, participants reported feeling less stressed and more peaceful, calm, secure, excited, and happy, and were able to sustain those feelings. Additionally, participants indicated more interest in caring for nature through conservation behaviors (Richardson et al., 2018). A similar study with children likewise reported that the positive emotional shifts resulting from engagement with nature persisted (Ward-Smith et al., 2020).

A meta-analysis of multidisciplinary research provided evidence that interactions with nature contribute cultural as well as psychological benefits to well-being. Four channels of human interaction with nature were identified: thinking about nature, remote observations of nature (i.e. looking at nature), physical interaction with nature, and everyday living within nature. (Russell et al., 2013). Each channel contributed to identified areas of well-being, although not all equally in each area. While none of these studies focused on wildlife specifically, they provide a framework for considering the structure and potential benefits of wildlife interactions.

Russell et al. noted a lack of empirical evidence for the spiritual health benefits of nature interactions (2013), but, based on my lived experience and the philosophies of Abram and Weber, interactions with nature provide benefits that are spiritual. Although one study addresses anxiety, it concluded that nature invokes the spiritual aspect of well-being by deeply engaging the senses, creating a sense of the perfection of nature, and opening one to an expansive sense of space (Martyn & Brymer, 2016). A look at the negative bias present in views of human-wildlife interactions indicates that positive aspects of encounters with wildlife include the spiritual feelings of awe, fascination, and beauty. One can become fully immersed in engagement with

wildlife, such as watching an animal's natural behaviors (Buijs & Jacobs, 2021), which I relate to the flow state achieved in somatic practices like yoga, playing music, and making art. Additionally, time in nature creates opportunities for self-reflection (Ward-Smith et al., 2020). Safe encounters with wild animals, especially large or rarely seen species, can bring the observer into a liminal space, where they experience the encounter as something outside of normal awareness (Nelson, 2008), such as a shaman does. Other perceived benefits of nature connection include enhanced imagination and creativity, and more collaborative problem solving when a group has a shared nature experience.

When one embodies a sense of nature connection, their awareness of self becomes more integrated into the ecology and there is a realization of belonging to the interdependent ecosystem (Ward-Smith et al., 2020). With that realization comes a recognition of life stories shared by the community of beings in the ecosystem, which cultivates compassion for one's fellow beings. Compassion then becomes a pathway to increased care for other beings and taking action for the good of the ecosystem (Richardson et al., 2020). One implication of a compassionate and caring relationship with wildlife is that one would seek further nonviolent interactions with wildlife. Unfortunately, those opportunities have been limited by conventions in wildlife management and encounter tourism.

## The Violent Approach to Wildlife Management

The field of wildlife management arose from the need to address the dwindling numbers of game species due to overhunting. At the time, the prevailing views in Western science were that animals were little more than machines and, based on Judeo-Christian premises, humans had dominance over nature. In a review of wildlife management agency practices, Edelblutte et al. state, "Animals are considered inferior and subordinate to humans, lacking emotion, free will,

self-consciousness, or personhood" (2023, p. 7). They also maintain that "Current [wildlife conservation and management] approaches perpetuate the idea that humans can control and contain animals. Often when wildlife leave designated spaces or exhibit novel behaviors, they are viewed as overabundant, out-of-place, or problematic" (Edelblutte et al., 2023, p. 7). I agree, based on my experience monitoring New York State Department of Environmental Conservation responses to human-wildlife conflict situations, that the standard way of thinking is that humans are superior to wildlife and the value of wildlife derives only from its desirability as hunted game.

Human-wildlife conflicts often arise in settings where wildlife is considered a threat to production and livelihood, such as farmed fields or where livestock grazes. Humans working in these settings are likely to have a negative view of wildlife and experience fewer of the benefits of nature interactions. One study of children spending time in nature reported that those who had some type of work relationship with nature disclosed that time in natural environments reminded them of their work demands (Collado et al., 2015) and were therefore not beneficial. Due to the typical approach to human-wildlife conflict, lethal control is often applied in cases where wildlife threatens human interests (Buijs & Jacobs, 2021).

Even in situations that have the potential to create a sense of connectedness and foster well-being, interactions with wildlife are often considered conflicts. Particularly in urban and suburban settings, many people assume that the wildlife they encounter is a danger to themselves or their property. In my role as a licensed wildlife rehabilitator, I occasionally field calls regarding wildlife regarded as threatening or a nuisance. When I discuss nonviolent wildlife conflict resolution strategies with those individuals, I am often disappointed that they deem those methods unacceptable because they are inconvenient or more expensive than lethal measures. I

agree with Buijs and Jacobs that much of the empirical research on human interactions with wildlife is focused on conflict and overemphasizes the negative aspects of the interactions (2021), and I believe the result is a significant portion of the human population has been conditioned to view any interaction between themselves and wildlife as threatening or intolerable. This view is regrettable because it limits the potential for increased well-being and compassionate action.

Unfortunately, the same assumption of animal inferiority that has informed wildlife management practices has also been pervasive in wildlife tourism, where animal welfare is often ignored in favor of human satisfaction from the encounter. Rather than the patient, unexpectant meditation practice that led to my intimate encounter with the red squirrel, wildlife watchers will enter habitat without care for the harmful effects their presence has on the well-being of the animals they hope to observe or, worse, kill for a trophy. Harm can include disruption of foraging, hunting, nesting, or breeding activities, as well as renovation or destruction of habitat. The presence of humans will, in some cases, cause stress, injury, or even death to wildlife (Ballantyne et al., 2007). A study of birdwatchers revealed that, while some birdwatchers simply lack of knowledge about potential harm from their activities, some birdwatchers will choose to act without regard for wildlife welfare simply because they desire close interactions with the birds (Aas et al., 2023). I observed this tendency to be ignorant of or ignore possible harm in New York's spelunkers when they continued to explore caves even after it was known that their activity was spreading the fungus responsible for white nose syndrome, which has killed thousands of bats in the state.

A positive observation in the birdwatcher study was that birdwatchers tended to self-select into groups with shared values. When behaviors that were protective of wildlife were

modeled in the group, other group members would follow them (Aas et al., 2023). Birdwatchers consciously acting in appropriate ways in the presence of wildlife represent a shift in attitudes towards wildlife. Wildlife managers are becoming aware that the species that needs to be managed is humans. The issues related to the human side of wildlife interactions include social and political issues that must be addressed along with education around coexistence and cohabitation with wildlife (Nelson, 2008).

Recently, wildlife management has become more interdisciplinary. Standard practices have been influenced by contributors such as animal behaviorists and animal legal theorists. Wildlife management theory now incorporates concepts including animal sentience, adaptation capabilities, the personality, lived experience, and social learning of individual animals, and the way animals and humans co-shape environments they share (Edelblutte et al., 2023). Public education should convey those concepts and include an understanding of human responsibility for maintaining wildlife habitat they have moved into and the types of wildlife they are likely to encounter. Humans who felt prepared for wildlife encounters felt safer, expressed interest in the possibility of such an encounter, and had a more positive attitude towards wildlife in general (Nelson, 2008). Recent trends in zoos, safari parks, wildlife tourism, and green space development reflect the desire to educate the public and have increased opportunities for nonviolent interactions with wildlife.

## Nonviolent Approaches to Wildlife Interactions

Research into nature connectedness provides a framework for creating zoo and controlled non-captive wildlife encounters that encourage conservation behavior and support human well-being (Richardson et al., 2020). I do not believe that zoos can provide wild animals with ideal living conditions, but I acknowledge that there has been a shift in focus towards species and

habitat conservation by zoos and that interpreted exhibits may best introduction to the possibility of meaningful wildlife interactions for many humans. The direction is towards third generation zoo exhibits which mimic original habitat and encourage natural behavior that can be observed. These exhibits provide enrichment for the animals as well as opportunities to showcase conservation information (Ballantyne et al., 2007). Controlled non-captive spaces, such as drive-through safari parks, can even more closely reflect an animal's natural habitat and behaviors, although humans may be disappointed that those behaviors include hiding.

Talks and demonstrations which include live animals are a safe way for humans to have close encounters with wildlife. Though I concede that there are still many live animal shows that are exploitive and disregard the animals' welfare, they are also tending towards high standards of animal care and public education. I am a keeper and presenter of educational ambassador animals; admittedly, I am biased in support of live animal demonstrations. An increasing number of ambassador animals come from wildlife rehabilitation after being designated as not releasable due to permanent disability or habituation to humans that makes survival in the wild impossible. Before a transition to ambassadorship was permitted, these individuals would be euthanized. Now individuals with appropriate temperaments have a second chance at life and strict regulations regarding their recruitment and keeping ensure their welfare. Some of these animals are placed in zoos for demonstrations, static exhibits, or conservation breeding programs. Ballantyne et al. found that the audience for interactive demonstrations with live animals learned and retained more knowledge about wildlife than those observing animals in exhibits and were more likely to support wildlife conservation (2007).

Public outcry against trophy hunting and global awareness of conservation challenges shifted the focus of wildlife tourism, too. Making education of key component of in-habitat

wildlife encounters has reduced the harm caused by wildlife tourism. Safaris, bird watching tours, wildlife treks, and whale watching trips are examples of experiences made more compassionate by promoting appropriate behaviors and conservation through education. Interest in hunting has waned and wildlife management agencies must transform to serve conservation-minded stakeholders (Jacobson & Decker, 2006). Rather than game species, wildlife agencies are promoting charismatic species that humans will enjoy watching, encouraging non-hunters to have nature experiences (Nelson, 2008).

Urban and suburban development is incorporating more green space in a positive sign for nature and wildlife interaction opportunities. A study found that access to a park for physical activity was associated with support for conservation (Dean et al., 2019). Another study noted that green space with meadows and trees rather than manicured lawns was more desirable (Douglas, 2021). Greater biodiversity increases opportunities for interacting with wildlife. A crucial element to transforming interactions into conservation action, though, is emotional engagement (Cunsolo & Landman, 2017). I believe that backyards may be better than parks in providing opportunities to cultivate care. Residential yards have their own ecosystems for humans to connect with. Shifting from the paradigm of human dominance and control of nature is essential for feelings of connectedness to develop, and to avoid the frustrations that come with being selective about the species one wishes to see. In *Another End of the World is Possible*, Servigne et al. wrote, “The biosphere…has an incredible 3.8 billion years of experience of resilience and of problem-solving…” (2020, p. 146). Squirrels, opossums, raccoons, snakes, pigeons, and other “pests” will outwit nonlethal barriers if the yard has desirable food or habitat. Like the parks, a biodiverse backyard will cultivate a deeper sense of connectedness, and a

higher density of wildlife facilitates engagement with individual animals on a regular basis which fosters an emotional connection to them.

Two spiritual practices in which I regularly engage, sit spot and shamanic journeying, build capacity for compassionate interactions with wildlife. My sit spot practice is based on the instructions in *Coyote's Guide to Connecting with Nature*. A sit spot is, essentially, an outdoor place one goes to regularly to sit, observe, and get to know the nature community there. As one sits, the wildlife becomes acquainted with them (Young et al., 2010). It was during this practice that I had the beforementioned interaction with the red squirrel. When I began my sit spot practice I did so with the commitment to sit every day at the same time, no matter what the weather was, which turned out to be a crucial aspect of my practice. The squirrels and blue jays learned when to expect me and that they could count on receiving nuts to eat every day at that time, which built trust. At the same time, I experienced the same weather as the wildlife did; although I had the protection of appropriate outerwear and a home to retreat to when I chose to go inside, I sensed connection through our shared experience of the rain or snow. I have been practicing sit spot for four years and recommend the practice to anyone interested in feeling more connected to wildlife or nature.

Shamanic journeying, while not necessarily a direct interaction with wildlife, is a way to gain insight into the character of the living world through the experience of non-ordinary reality. I learned shamanic journeying as part of my training with Shamanic Reiki Worldwide, which instructs a blended practice of Reiki energy transmission and shamanic energy techniques. During the journey, consciousness shifts, usually aided by the sound of a drum or rattle, into an imagined world where one can meet helping spirits, receive messages or insights, and request healing. Perhaps because I already had an affinity for wild animals, my helping spirits tend to

appear as animal I see in ordinary reality. Whenever a new helper appears, I take time after the journey to consider and, if I do not already know, research that animal's natural history and conservation challenges are, so the journey's meaning is grounded in life on Earth as well as in the spirit realms. The knowledge-seeking process has inspired my care expressed as wildlife rehabilitation and habitat restoration, motivated my activism on behalf of wildlife, and increased my feelings of nature connectedness. The sense of connectedness created through Russell et al.'s four channels of human interaction with nature (2013) open a pathway to hope.

## Practicing Hope in the Anthropocene

Earth's inhabitants are facing several crises in the Anthropocene, including unprecedented biodiversity loss, environmental degradation, and runaway climate change. None of these crises has a clear solution, much less a certain outcome, and climate anxiety among humans is being acknowledged as a psychological disorder activated by an uncertain future. Sangervo et al. question if hope is a paralyzing emotion or a motivator to act despite feeling climate anxiety (2022). I agree that unjustified hope will most likely suppress action, but there is evidence in current research that hope fostered by a belief in the efficacy of actions and strong emotional ties to the possibility of success can reduce feelings of anxiety and motivate action (Ballantyne et al., 2007; Bury et al., 2020; Li & Monroe, 2019; Sangervo et al., 2022). If hope becomes constructive when linked to emotions such as compassion cultivated through nature connectedness and nonviolent engagement with wildlife creates feelings of nature connectedness, does the evidence suggest that wildlife engagement builds hope?

No proposed solutions to the climate crisis I am aware of have a high or even guarded probability of success. Evidence suggests, however, that, especially when one is emotionally invested in the outcome, feelings of hopefulness are created despite a low possibility of a

successful solution. Li and Monroe posited that hopefulness related to reasonableness and applied the Reasonable Person Model, a combination of theories that characterize environments that support engagement in problem-solving activities, to consider if hope is possible in the face of the climate crisis (2019). The theoretical framework considered knowledge and understanding of the climate crisis, the perception that mitigating actions will make a difference, and the belief that people have the necessary skills and abilities to act as correlates to hope. Li and Monroe concluded that those who held the belief that one or one's society has the necessary skills to solve the problem of climate change were more hopeful. They also discovered that those with a higher level of concern about the climate crisis tended to be more knowledgeable and possess more understanding of the causes and impacts of climate change (2019).

It may be that laypeople who understand the climate crisis are able to evaluate the possibility of success of proposed solutions more realistically. Surprisingly, it appears that those who recognize how low the odds of success are motivated by hope to act. The research of Bury et al. suggests that hope may motivate actions such as climate change mitigation behaviors, pro-environmental behavior, and political participation, even if those action are deemed to have unfavorable odds, if hope is accompanied by emotional devotion to the cause (2020). Along the same lines, Ballantyne et al. had previously concluded that those who are knowledgeable about conservation issues desire the tools and solutions to take conservation actions (2007). My conclusion, then, is that those who feel connected to nature are likely to also become emotionally invested in the Earth's climate and biodiversity crises, seek knowledge from sources ranging conservation-minded zoos to backyard observations, feel hopeful despite low odds of success, and then, if provided tools to do so, will take actions that address the crises. The key, therefore,

to impactful collective action to address the Earth's crisis is to provide humans with more opportunities for nature connectedness and gaining associated knowledge.

Activities that engage humans with wildlife in nonviolent ways already exist to not only fulfill the objectives of nature connectedness and learning, but that also are meaningful actions in and of themselves. Feeding wild birds, for instance, can be an accessible action even in urban settings. A limited study demonstrated that psychological benefits such as pleasure and relaxation result from watching birds at a feeder, which increases nature connectedness, but also noted that there were positive emotions and a sense of usefulness that arose from taking an action that helps birds survive (Dayer et al., 2019). This might suggest that small, conservation-focused actions may provide positive feedback that increases the belief in the efficacy of similar actions, but this assumption requires further investigation.

Permitted wildlife rescue and care volunteerism is another meaningful activity that may provide positive feedback like that attained from feeding birds. Rescue and care are particularly intimate engagements with wildlife because these activities often require physical contact with injured or orphaned animals, which goes beyond nonviolence into the realm of deep compassion and provides opportunities for perceptual reciprocity to be experienced with the touch sense, which is rare in non-captive wildlife engagements. Although too old to apply its conclusions to the present without an updated survey, a summarization of the characteristics of public wildlife rehabilitator cooperators, i.e. those who take part in the rescue and transport of an injured or orphaned wild animal to a licensed wildlife rehabilitator, in New York provides some insight into the ways in which the rescue activity can build hope. Of note is that 25% of the cooperators were already involved in a conservation or environmental organization. Other noteworthy characteristics were beliefs that humans should try to minimize suffering in wild animals and that

wildlife should only be hunted for food, which may indicate those surveyed are more likely to seek out nonviolent wildlife interactions (Siemer & Brown, 1992). In my experience of interacting with the public as a wildlife rehabilitator, I have found that, while some rescuers do so to assuage guilt about the harm done to the animal, such as when a pet injures an animal, most have a genuine concern for the animal's well-being, are receptive to suggestions for further involvement with wildlife rescue and conservation, and seek out other opportunities to learn about and engage with wildlife, such as volunteering to help the wildlife rehabilitator or attending educational events.

Habitat restoration projects, while most likely not providing direct physical engagement with wild animals, offer other hands-on experiences of nature that are caring rather than violent. The revival of an ecosystem requires knowledge of species' natural histories and interactions, plus habitat size and connectivity requirements (*Habitat Loss / Restoration*, n.d.). I could not find an examination of the psychological benefits to humans who participate in such projects, but it can be assumed that they would be similar to any nature engagement. However, applying Li and Monroe's framework suggests that habit restoration projects satisfy the knowing and understanding, meaningful action, and perceived effectiveness correlates to hope, so these projects may be more directly hope-building than other nature activities. My understanding is that habit restoration often creates climate resiliency across the entire landscape, such as how wetland restoration improves flood control, which provides evidence of effectiveness beyond the survival of directly affected species, further bolstering hope.

Each activity mentioned has the potential to benefit those engaged individually, but hope may be best cultivated in collective actions. If hope correlates with perceived effectiveness, then trust in society to participate in and not hinder actions is essential. Mitigating the causes and

effects of climate change will require broad societal participation (Sangervo et al., 2022) and hope that it can be done will be found in supportive groups that give humans the belief that they have a collective path to success (Cunsolo & Landman, 2017). Overall, these and other nonviolent interactions with wildlife create opportunities for personal and collaborative actions that address Earth's climate and biodiversity crises in ways that build hope.

## Conclusion

By examining human nonviolent engagement with wildlife in the context of more generalized nature interaction studies, I can attest that the benefits of such wildlife engagements would equal or exceed that of nonspecific nature interactions. Building on that attestation, the importance of opportunities for nonviolent wildlife engagement is clear. Shifting standards in wildlife management and captive care in zoos, conservation focuses by those who are guiding or interpreting wildlife encounters, and more interest in backyard wildlife observation are evidence of an increasing desire to have nonviolent wildlife interactions. Those interactions create an emotional investment in the state of nature, a key to building hope that individual and collective action can mitigate the climate, environmental, and biodiversity crises faced by all inhabitants of the Earth. Actions on behalf of wildlife reinforce the perceived efficacy of acting, create a positive feedback loop of nature connectedness as opportunities to encounter wildlife grow, and become hope-building practices.

## References

Aas, Ø., Jørgensen, F. M. O., Stensland, S., Reiertsen, T., & Dybsand, H. N. H. (2023). Your place or mine? Exploring birdwatching tourists' behaviour disturbing birds in a nature reserve. *European Journal of Wildlife Research*, *69*(3), 44. https://doi.org/10.1007/s10344-023-01678-y

Abram, D. (1996). *The Spell of the Sensuous*. Vintage Books.

Ballantyne, R., Packer, J., Hughes, K., & Dierking, L. (2007). Conservation learning in wildlife tourism settings: Lessons from research in zoos and aquariums. *Environmental Education Research*, *13*(3), 367–383. https://doi.org/10.1080/13504620701430604

Buijs, A., & Jacobs, M. (2021). Avoiding negativity bias: Towards a positive psychology of human–wildlife relationships. *Ambio*, *50*(2), 281–288. https://doi.org/10.1007/s13280-020-01394-w

Bury, S. M., Wenzel, M., & Woodyatt, L. (2020). Against the odds: Hope as an antecedent of support for climate change action. *British Journal of Social Psychology*, *59*(2), 289–310. https://doi.org/10.1111/bjso.12343

Collado, S., Corraliza, J. A., Staats, H., & Ruiz, M. (2015). Effect of frequency and mode of contact with nature on children's self-reported ecological behaviors. *Journal of Environmental Psychology*, *41*, 65–73. https://doi.org/10.1016/j.jenvp.2014.11.001

Cunsolo, A., & Landman, K. (Eds.). (2017). *Mourning nature: Hope at the heart of ecological loss and grief*. McGill-Queen's University Press.

Dayer, A. A., Rosenblatt, C., Bonter, D. N., Faulkner, H., Hall, R. J., Hochachka, W. M., Phillips, T. B., & Hawley, D. M. (2019). Observations at backyard bird feeders influence the emotions and actions of people that feed birds. *People and Nature*, *1*(2), 138–151. https://doi.org/10.1002/pan3.17

Dean, A. J., Barnett, A. G., Wilson, K. A., & Turrell, G. (2019). Beyond the 'extinction of experience' – Novel pathways between nature experience and support for nature conservation. *Global Environmental Change*, *55*, 48–57. https://doi.org/10.1016/j.gloenvcha.2019.02.002

Douglas, K. (2021). The nature fix. *New Scientist*, *249*(3327), 36–40. https://doi.org/10.1016/S0262-4079(21)00522-4

Edelblutte, É., Krithivasan, R., & Hayek, M. N. (2023). Animal agency in wildlife conservation and management. *Conservation Biology*, *37*(1), e13853. https://doi.org/10.1111/cobi.13853

*Habitat loss / restoration*. (n.d.). Understanding Global Change. Retrieved December 14, 2023, from https://ugc.berkeley.edu/background-content/habitat-loss-restoration/

Jacobson, C. A., & Decker, D. J. (2006). In My Opinion: Ensuring the Future of State Wildlife Management: Understanding Challenges for Institutional Change. *Wildlife Society Bulletin*, *34*(2), 531–536. https://doi.org/10.2193/0091-7648(2006)34[531:ETFOSW]2.0.CO;2

Li, C. J., & Monroe, M. C. (2019). Exploring the essential psychological factors in fostering hope concerning climate change. *Environmental Education Research*, *25*(6), 936–954. https://doi.org/10.1080/13504622.2017.1367916

Martyn, P., & Brymer, E. (2016). The relationship between nature relatedness and anxiety. *Journal of Health Psychology*, *21*(7), 1436–1445.

Nelson, L. (2008). Managing Human-Wildlife Interaction. *International Journal of Public Administration*, *31*(3), 287–297. https://doi.org/10.1080/01900690701590488

Richardson, M., Dobson, J., Abson, D. J., Lumber, R., Hunt, A., Young, R., & Moorhouse, B. (2020). Applying the pathways to nature connectedness at a societal scale: A leverage points perspective. *Ecosystems and People*, *16*(1), 387–401. https://doi.org/10.1080/26395916.2020.1844296

Richardson, M., McEwan, K., & Garip, G. (2018). 30 Days Wild: Who benefits most? *Journal of Public Mental Health*, *17*(3), 95–104. https://doi.org/10.1108/JPMH-02-2018-0018

Russell, R., Guerry, A. D., Balvanera, P., Gould, R. K., & Basurto, X. (2013). Humans and Nature: How Knowing and Experiencing Nature Affect Well-Being. *Annual Review of Environment and Resources*, *38*, 473–502.

Sangervo, J., Jylhä, K. M., & Pihkala, P. (2022). Climate anxiety: Conceptual considerations, and connections with climate hope and action. *Global Environmental Change*, *76*, 102569. https://doi.org/10.1016/j.gloenvcha.2022.102569

Servigne, P., Stevens, R., Chapelle, G., & Samuel, G. (2020). *Another end of the world is possible: Living the collapse (and not merely surviving it)*. Polity Press.

Siemer, W. F., & Brown, T. L. (1992). Characteristics of wildlife rehabilitation cooperators in New York. *Department of Natural Resources at Cornell University*. https://ecommons.cornell.edu/bitstream/handle/1813/43245/HDRUReport94-5.pdf?sequence=1

Ward-Smith, C., Naidoo, T., Olvitt, L., & Akhurst, J. (2020). Perceived benefits of nature-based experiences as mediators of connectedness with nature: The case of Mystic Mountain. *South African Journal of Psychology*, *50*(4), 553–564. https://doi.org/10.1177/0081246320947064

Weber, A. (2017). *Matter and Desire: An Erotic Ecology* (R. Bradley, Trans.). Chelsea Green Publishing.

Young, J., Haas, E., & McGown, E. (2010). *Coyote's guide to connecting with nature* (2nd ed). OWLLink Media.