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The Key to CONSERVATION

Three zoos and aquariums are designing environmental empathy into their work.

By Elif M. Gokcigdem, Jim Wharton, Michele Miller Houck, Kristin Dean, and Laurie Stuart

In a time when the biological diversity of our planet is at risk, zoos and aquariums are doing pioneering work to mitigate the loss of nature by addressing an important agent of behavior change: empathy. Their work in building empathy for positive conservation outcomes is rooted in evidence-based, long-term, multidisciplinary collaboration that is action oriented. When a fun visit to a zoo or an aquarium is transformed into one that also builds empathy, bridges of understanding, and emotional connections with the environment, we can appreciate the importance of our individual choices within an interconnected universe.

To mitigate and reverse destructive behavior that contributes to the loss of nature, we need more than an intellectual understanding of the environment. We need an emotional connection that makes us care, be concerned, and act compassionately. This requires a pragmatic perspective shift where, through the lens of empathy, we might realize we are inherently connected to something much greater than ourselves—all of humanity and the environment. This understanding

> "When we try to pick out anything by itself, we find it hitched to everything else in the universe. One fancies a heart like our own must be beating in every crystal and cell, and we feel like stopping to speak to the plants and animals as friendly fellow mountaineers."
>
> —John Muir

inspires us to calibrate and harmonize our attitudes, behaviors, and actions within this whole and leads to a more humble worldview that recognizes the environment's independent value and right to exist. At this critical moment in history, humanity's collective survival depends on our ability to inspire this fundamental perspective shift.

As science- and research-based informal learning platforms, zoos and aquariums bring people closer, both intellectually and emotionally, to the "other"—our planet and the variety of life that it supports. They can create meaningful encounters with our environment where we also learn about ourselves, notice our biases, and understand our responsibility as integral parts of this interconnected, fragile whole. Zoos and aquariums can offer experiences of awe and wonder, experiential learning, storytelling, and contemplation that are known to foster empathy. And they can inspire action by intentionally incorporating empathy into their institutional cultures while modeling behavior in their practices, policies, and leadership.

Following are three examples of zoos and aquariums that are intentionally building empathy to inspire environmental and wildlife conservation—and are simultaneously being shaped by the very tools that they are innovating to become more empathetic institutions themselves.—Elif M. Gokcigdem

Children at the Seattle Aquarium interact with an octopus.

Seattle Aquarium

Why Build Empathy?

By Jim Wharton

According to data from the United Nations, more than half the world's population lives in cities. In North America, it's more like 80 percent. We are more urban, more digital . . . and in many ways, less connected to nature than ever before. We don't often know where our food comes from or where our waste goes.

As people become more disconnected from the natural world, animals and habitats become unfamiliar, even frightening. If terrestrial ecosystems are unfamiliar, marine and aquatic environs are downright alien—less accessible, harder to explore, difficult to understand. Fostering empathy in zoo and aquarium settings can mitigate, if not reverse, this disconnection.

Research on the best practices for developing empathy encourages authentic animal experiences that allow people to observe an animal's agency and share their experience of the world through rich, sensory inputs. If you can see what an animal sees, smell what an animal smells, and feel what an animal feels, it's easier to imagine a shared perspective.

All mammals share similar emotions (though we may experience them differently), but if we restrict our idea of empathy to merely emotions, we also limit our opportunity to explore our connections with the vast majority of life on Earth. A sea star may not have emotions, but it does have a perspective of the world. It collects sensory input and reacts to stimuli in consistent ways. We can understand that responding to a shadow above by holding on tight is an appropriate response to what might be a predator, even if a sea star doesn't have the neural hardware to experience fear. Some might consider this anthropomorphism (applying human characteristics to non-human objects), but what we're really doing is learning by connecting the perspective and experience of the sea star to an experience with which we are more familiar (our own).

Learning how our experience of the world overlaps with an animal's is productive and beneficial, but it requires an investment. We must be open to learning about the animal and its life so that when we reach out to empathize, we accurately acknowledge a shared experience rather than merely replacing an animal's experience with our own. The latter is a kind of anthropo*centrism* that is much more dangerous than anthropomorphism because it centers the human experience as the most universal and important at the expense of other living things.

Perspective-taking also requires us to be open to seeing the shared characteristics and experiences humans may hold with non-human animals. The notion of human exceptionalism (the belief that humans are categorically or essentially different from all other animals) may suggest that being "like" an animal makes us somehow less than human and can prevent us from exploring our connections.

At the Seattle Aquarium we use knowledge-building and anthropomorphic metaphors to help people see their connections to barnacles, sea cucumbers, octopuses, anemones, urchins, and more. Using names and personal pronouns (he, she, they) helps visitors see animals as subjective others rather than "natural objects." Sharing information in narratives, rather than just presenting facts, facilitates perspective-taking. By learning to connect and empathize with animals, we bring them into our circle of concern. By appreciating the expansive biodiversity of the ocean and beyond, we can also begin to appreciate our place as a mere thread in the great tapestry of life.

Nose-to-beak experiences like this young man holding his first falcon are one important tipping point for environmental empathy--achieved through wonder.

Michele Miller Houck, Carolina Raptor Center, used with permission

The Wonder Project

By Michele Miller Houck and Kristin Dean

Established in 1981, the Carolina Raptor Center is an avian zoological facility and environmental education center permitted by the US Fish and Wildlife Service for the display and rehabilitation of birds of prey. Our mission is to ignite imaginations and engage people with the natural world so they will act on behalf of the environment.

We became interested in the concept of wonder when we adopted a new educational platform called "Birds Inspire" in preparation for the development of a new campus. In 2016, we partnered with researcher Mary Beth Ausman to embark on The Wonder Project, a yearlong examination of the visitor experience to help us understand the elements of wonder. As we observed visitors interacting with our people, birds, and exhibits, we realized that we relied heavily on "cognitive wonder" (the "how" of the natural world) instead of "emotional wonder" (the "wow"). To get in touch with our "wow" factor, we needed to figure out defining moments that already existed in our facility so that we could create more of them.

We developed a five-question activity that asked visitors to choose their responses to the following questions: What did you see that you will remember? What did that make you think about? How did that make you feel? Who inspired you today? And, most importantly, what are you going to do about it? Responses were organized in a Likert scale in which 1 was the least desirable response and 5 the most desirable. Scores from the first summer ranged from 2.1–2.7 for each question. After revisions in programming, interpretation, and nose-to-beak experiences for the second summer, raw scores rose 0.3–0.7 points.

This project showed us that the key to wonder is creating extraordinary experiences for humans, because human-centric design has the power to create meaningful connections with the animals. Using words that people understand (family, baby, food, love) sparks curiosity about birds (and the natural world) and inspires people to care about their protection.

This research prompted us to create "Tell Your Raptor Story," a new exhibition currently being prototyped at off-site events and via curated on-site experiences, that is scheduled to be installed at our new Raptor Trail at Quest facility in 2025. The experience

begins with visitors identifying their raptor avatar and taking on the mantle of that bird throughout the facility. A seven-question quiz asks visitors their own preferences on food, habitat, and social situations and then matches them with one of six bird groups. Participants get a sticker that identifies them as part of that group: "I am an owl."

As they move through the facility, they encounter birds (and humans) of their type, sparking conversations around the accuracy of the quiz, their new bird persona, or the associated superpowers. Close encounters with the animals enhance empathy by creating a defining moment, a memory, which draws the visitor closer, creating a palpable bond with the natural world.

The new identity that the raptor avatar provides breaks down social barriers and offers the visitor membership in a new group that crosses cultural, political, and economic barriers and builds new understanding. Empathy for their bird grows as they make new connections throughout the experience. Prototypes for this experience have used bird costumes at a selfie station to connect people to their bird. The focus then shifts from the individual—"I am an owl"—to the group: "We are part of the parliament of owls." Curiosity about the bird, the bird's habitat, or even where the bird shows up in a visitor's cultural tradition appears to activate the desire to help protect the bird and its habitat.

Future plans for the avatars include affinity groups, special events, and store merchandising—all to provide more connection points after the initial experience. The "Tell Your Raptor Story" exhibition space will include hands-on stations to test your raptor superpower and write your raptor story, and a storytelling circle will feature storytellers from a wide variety of cultural backgrounds. Each element is designed to touch the heart, teach the mind, and create wonder so that the human visitors will take action on behalf of the birds.

Catalyzing Empathy-Based Programming

By Laurie Stuart

Recognizing the collaborative nature of understanding and fostering empathy for animals, the Woodland Park Zoo in Seattle, Washington, invited 19 zoos and aquariums from the region to its first "Creating Change Symposium: How Empathy Can Advance Your Mission" in February 2019. The goal of the 2019 symposium was to generate commitment among participating organizations to develop and implement empathy-based programming by providing summaries of current research, foundational tools, and opportunities to collaborate across institutions.

From this event, the Advancing Conservation through Empathy (ACE) for Wildlife Network was launched as a vehicle for organizations to support one another in designing and implementing empathy-based programming in diverse contexts. Partners in the ACE for Wildlife Network are working together to advance effective practices in using empathy-driven experiences to not only connect visitors to the animals they engage with at our facilities, but also to catalyze pro-environmental behaviors for the benefit of wildlife and habitats that our visitors may never encounter directly.

Research indicates that evoking empathetic responses toward specific animals or plants can increase a person's willingness to take actions that protect the environment. However, we don't yet understand how to align someone's empathy-driven connection to "Taj," a rhino at the zoo that visitors can meet up close, with the pro-conservation behaviors they could take immediately or later in life on behalf of wild rhino populations thousands of miles away.

A girl and a tiger sit together at the Woodland Park Zoo in Seattle.

Jeremy Dwyer-Lindgren, Woodland Park Zoo

Currently, the team at Woodland Park Zoo is working on a causal chain model that describes three key pathways by which empathy-based programming on-site might influence a social movement for conservation, meeting our mission to make conservation a priority in everyone's lives. These pathways foster informed connections with animals, reinforce social-emotional development such as self- and social awareness, and strengthen self-efficacy so that individuals are empowered to take meaningful action in response to their empathetic connections. To incorporate these pathways into zoo programming, such as in our Creature Feature presentations with ambassador animals, the Woodland Park Zoo has published an "Empathy Bridge" tool that outlines nonlinear strategies for utilizing language and activities that increase visitors' knowledge, emotional awareness, and sense of self-empowerment that leads to participation (see Resources at left for a link to more information on this tool).

Effective conservation requires complex conversations and pro-environmental actions that no single person or organization can achieve on their own. Therefore, the most effective empathy-based programming must also incorporate the human contexts of conservation issues by fostering pro-social empathy for other communities of people. For example, keeper talks that focus on tigers at Woodland Park Zoo not only encourage empathetic perspective shifts toward our resident tigers and tigers in the wild, but also connect our visitors to the human communities that coexist with and steward indigenous tiger populations in places like Malaysia.

Eventually, we hope that by bridging empathetic connection-making, people will feel inspired to take community-level actions made in mutual consideration of human and non-human animals within any habitat. While the zoo highlights successful conservation stories and shares resources on solutions, such as supporting only sustainable palm oil production, we believe that communities are in the best position to define and implement actions that meet specific conservation needs. Rather than prescribing specific activities, we hope that fostering empathy for wildlife and humans, as well as empowering individuals and communities to participate in conservation activities, will result in the most innovative and self-sustaining behaviors.

To this end, both Woodland Park Zoo and our partners in the ACE for Wildlife Network are currently asking meaningful questions, such as what empathetic connection looks like in different cultural contexts, how empathy for animals is experienced within subsistence-based communities, and whether it is possible to foster empathy for landscapes as living entities. The network is committed to including organizations with diverse audiences, missions, and representative voices so that we can strengthen ongoing conversations about best practices in fostering empathy for wildlife conservation.

RESOURCES

Empathy-Building Through Museums initiative
elifgokcigdem.com

Seattle Aquarium's empathy work
seattleaquarium.org/fostering-empathy-wildlife

Carolina Raptor Center's new YouTube series, Avian Adventures
youtube.com/c/CarolinaRaptorCenter

ACE for Wildlife Network
aceforwildlife.org

Woodland Park Zoo's empathy journey
zoo.org/empathy

Woodland Park Zoo's "Empathy Bridge"
aam-us.org/2021/03/19/an-empathy-bridge-helps-the-woodland-park-zoo-drive-social-change/

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