

KINSHIP

Belonging In A World Of Relations



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P L A N E T

Edited by

Gavin Van Horn, Robin Wall Kimmerer, John Hausdoerffer

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KINSHIP THROUGH THE SENSES, ARTS, AND SCIENCES

Bron Taylor

On the due date of our first child, my very pregnant wife and I were swimming outside the surf line off the Southern California coast. Suddenly, we were surrounded by a pod of dolphins. They swam with us for quite a while, whistling and—it seemed to us—singing, as though they recognized that another swimming mammal would soon give birth. Were they, in their own way, excited for us, welcoming a new one to their watery world? Decades later, I learned that female dolphins sing to their babies while in the womb, which renewed my wonderings.¹

Experiences such as the one I had with the dolphin pod have informed my scholarly pursuits. Indeed, for decades, I have wandered through the environmental milieu, the diverse venues where environmentally engaged individuals and groups encounter and influence one another. I have interviewed hundreds of greens, tracked the writers and scientists, activists and artists, and a host of others whom, these ardent environmentalists say, have inspired them. I have read scores of historical and social-scientific studies that address the research question that has long preoccupied my attention: what might mobilize our species to respond effectively to slow and eventually halt the accelerating anthropogenic reduction of Earth's biocultural and cultural diversity?

Among the things I have learned is that feelings of kinship with species other than our own often animate behaviors that promote environmental health and the conservation of biodiversity. These feelings are integrated into an overall worldview, a cosmovision,

that includes a cosmogony (an understanding of how the world came to be), perceptions of belonging to nature, humility about the human place in the world, convictions that all living things have intrinsic value, and love and loyalty to Earth and its living systems.

There are many specific experiences and insights that lead to such “dark green” worldviews, as I have come to call them. Those who find their way to such understandings do so via three main paths: through direct, visceral, sensory experience in nature; through the arts; and through the sciences. These paths are not, however, separate. They weave back and forth in reciprocally influential ways through the lives of diverse individuals and groups.

Kinship through the Senses

Direct, visceral, sensory experiences in nature—including experiences of awe and wonder at the beauties, mysteries, and sometimes terrors of nature, especially through personal encounters with nonhuman organisms—are a common pathway to kinship sentiments and ethics. Kinship sentiments and ethics involve perceptions of being related to someone, with corresponding feelings of caring and responsibility toward one’s relations. John Muir provided a classic example of this when exulting in the beauty and power of nature and enraptured by various plants and animals. He wrote that through such experiences, “We feel ourselves part of wild Nature, kin to everything.”²

Another experience that often leads to kinship sentiments transpires when someone looks into the eyes of another organism. The famous primatologist Jane Goodall, for example, felt a deep sense of connection when looking into the eyes of a dominant male chimpanzee whom she named David Greybeard; his eyes seemed a gateway to his gentle personality. Further illustrating how the eyes convey agency, intelligence, and value, Goodall has often related the story of a man who witnessed a chimpanzee who had recently been introduced into a zoo enclosure escape an attack

by other chimpanzees, only to end up drowning in a water-filled moat. Looking into the distressed chimpanzee's eyes, the man perceived an appeal for help and risked his own life to save the chimp.

The ethologist Marc Bekoff, with whom Goodall has often collaborated, had a similar revelation when he was told to kill a cat as part of a laboratory experiment. When Bekoff gazed into the cat's eyes, he perceived that the cat knew what was coming and was plaintively asking, "Why me?" Bekoff concluded, on the basis of this experience, that "there is no more direct animal-to-animal communication than staring deeply into another's eyes . . . it is the eyes that most evocatively convey sentience."³ This experience, and his subsequent studies of animal emotions, led him to promote "compassionate conservation," which seeks to fuse concern for individual animals and ecosystems. Such experiences are so common, awakening concern for animals and often the ecosystems they depend on, that I have termed them *eye-to-eye epiphanies*.⁴

Kinship through the Arts

Scores of artists seek to evoke or reinforce kinship with nonhuman organisms and environmental systems through the diverse media they work in—nature photography, documentaries, motion pictures, painting, sculpture, novels, and poetry—sometimes by expressing kinship feelings that they have first experienced through sensory encounters with other species. An apt example of this is Frans Lanting's coffee table-sized book *Eye to Eye: Intimate Encounters with the Animal World*, which is replete with stunning photographs of animal eyes (fig. 1). In the introduction, Lanting explained how his path to using photography in the cause of conservation began with a book he read as a child, *The Wonderful Adventures of Nils*, by the Nobel Prize-winning Swedish author Selma Lagerlöf. First published in 1907, the story is about a boy named Nils who is magically shrunk to the size of an elf and then lives for a year with a family of geese. When he returns to his human

size, however, the geese become afraid of him. Nevertheless, they urge Nils to become an advocate for them in the human world. Lanting explained that this story kindled his ability “to see the world through other eyes” and “to celebrate the kinship of all life.”⁵

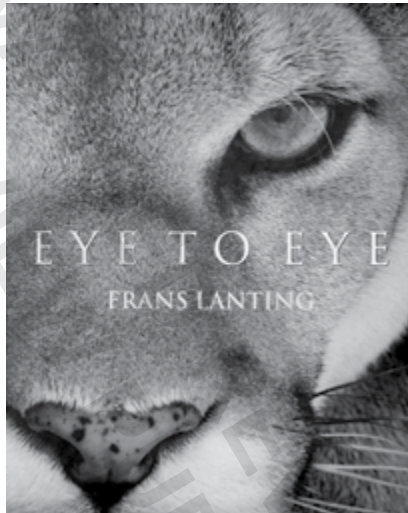


Figure 1. The cover art from Frans Lanting's kinship-expressing *Eye to Eye*. Courtesy of Frans Lanting.

Kinship through the Sciences

The sciences, especially those that illuminate the evolution of life on Earth, provide powerful testimony to the kinship of all life. Charles Darwin alluded to such kinship with these seldom-quoted words: “If we choose to let conjecture run wild, then animals, our fellow brethren in pain, diseases, death, suffering and famine—our slaves in the most laborious works, our companions in our amusements—they may partake [of] our origin in one common ancestor—we may be all netted together.”⁶

Darwin's suggestion that we empathize with other animals was rooted in an understanding of ecological interdependence as well as in his then-emerging understanding of biological kinship;

later he would conclude that sympathy is a strong human instinct.⁷ Others would go on to draw out the ethical implications of such understandings.

During the 1920s, for example, the humanitarian theologian and physician Albert Schweitzer first advanced his “ethics of reverence for life,” for which in 1952 he was awarded the Nobel Peace Prize. Schweitzer rooted his ethics, in part, in a Darwinian recognition of, and empathy for, all living things, who struggle for existence and share, as he put it, a “will to live.” For Schweitzer, therefore, morality simply involves “the saving or helping of life.”⁸

It was the ecologist Aldo Leopold, however, who, in his now-famous book from 1949, specifically argued that an understanding of evolution should lead to felt kinship with other organisms and a broad environmental ethics: “It is a century now since Darwin gave us the first glimpse of the origin of species. We know now what was unknown to all the preceding caravan of generations: that men are only fellow-voyagers with other creatures in the odyssey of evolution. This new knowledge should have given us . . . a sense of kinship with fellow-creatures; a wish to live and let live; a sense of wonder over . . . the biotic enterprise.”⁹ Such an understanding, according to Leopold, is the result of social evolution, which is an “intellectual as well as emotional process,” and it ought to lead to an understanding of the self as a “plain member and citizen” of the biotic community, and even to “love, respect, and admiration” for entire ecosystems.

Not incidentally, Leopold did not base his ethics on science alone; it also had been kindled by an eye-to-eye encounter with a wolf. In engaging prose he related how as a young man he once shot an old, female wolf, reaching her “in time to watch a fierce green fire dying in her eyes.”¹⁰ The experience, he explained, was a turning point toward appreciating the value of predators and of ecosystems apart from their usefulness to our own species. Leopold’s evocative account has become one of the most celebrated stories in environmental letters; some have even referred to it as a sacred text.

Many others have deduced kinship ethics from scientific understandings. In 1979, for example, the biologist Edward O. Wilson coined the term *biophilia* for the theory that human beings have an evolution-derived “innate tendency to focus on life and lifelike processes.”¹¹ According to Wilson and his intellectual progeny, biophilia often involves profound appreciation for nature, and it tends to promote proenvironmental behaviors and thus adaptive socioecological systems. Critical among these understandings is a recognition that “we are literally kin to other organisms” and that our differences “are only a matter of degree.”¹²

The field of conservation biology, which also emerged during the late 1970s, exemplifies how experiences of kinship with nonhuman organisms, and feelings of belonging to nature, motivate many environmental scientists while lending credence to the notion of biophilia.¹³ For example, Michael Soulé, a founder of the discipline, wrote: “There is now no question that all life on earth evolved from a common ancestor. The genetic material and the codes embedded within it reveal that every living kind of plant and animal owes its existence to a single-celled ancestor that evolved some three and a half billion years ago. All species are *kin*.”¹⁴ Baird Callicott, who while promoting and refining Leopold’s land ethic played a leading role in founding the field of environmental philosophy, argued similarly: “Human beings are . . . kin—literally . . . to all other kinds of life.”¹⁵

Many others have come to similar views without using the word *kinship*, including Rachel Carson, who also presaged the biophilia hypothesis when, in 1954, she suggested an evolutionary root for the love of nature: “This affinity of the human spirit for the earth and its beauties is deeply and logically rooted” because “as human beings, we are part of the whole stream of life.”¹⁶

Kinship through the Senses, Sciences, and Arts

Understandings of biological kinship are expressed and promoted in a host of ways, including via science museums, aquariums,

documentary films, art exhibitions, and even theme parks. Close observation of such phenomena further demonstrates that, when it comes to the perception of interspecies kinship, there is a permeable boundary between the senses, the arts, and the sciences. Indeed, the sciences and arts begin with the senses, and all three seek to understand the world; the arts and sciences also seek to explain it. Edward Wilson had a complementary insight when he described artists as “expert observers” and art itself “as a device for exploration and discovery” that, among other functions, is able “to instruct by pleasing.”¹⁷

Among the scores of examples of artistic expressions of scientific understandings of kinship and of corresponding ethical obligations to nonhuman organisms that could be explored, herein, only a few must suffice. Although artistic representations of kinship have had their critics, it is important to note that exploring such problematics is beyond the current purpose. Nevertheless, it is clear that they attempt to express and promote kinship sentiments and ethics.¹⁸



Figure 2. Display showing how homologies provide evidence of Family (biological) Resemblances at the Hall of Human Origins. Photograph by Bron Taylor.

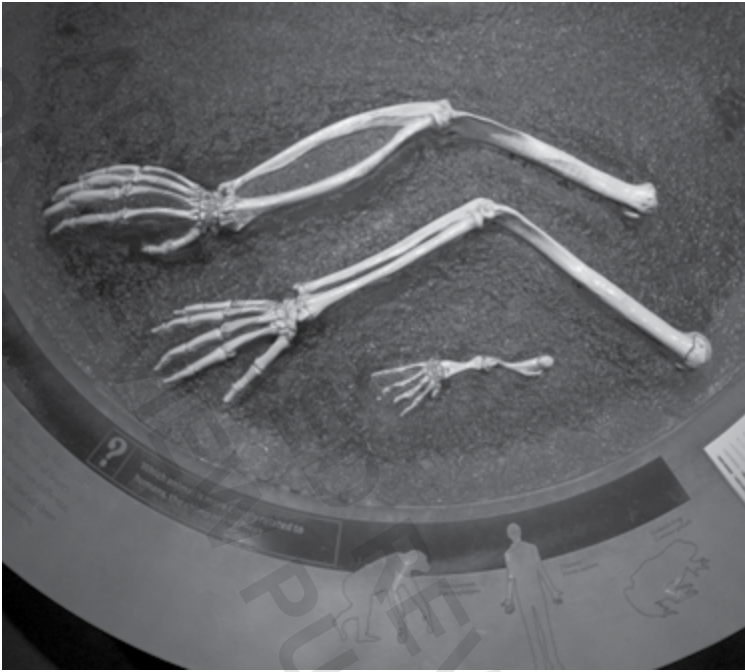


Figure 3. Close-up of display showing resemblance between the limbs of humans, chimpanzees, and goliath frogs. Photograph by Bron Taylor.

The Hall of Human Origins at New York City's American Museum of Natural History, for example, teaches biological kinship through diverse sculptures and interpretive panels. One display explains the “family resemblances” between humans, chimpanzees, and goliath frogs by showing the similarities between their appendages (fig. 2–3). The accompanying text reads: “All living things, from people to butterflies to mushrooms, are related to one another. . . . Both humans and birds have eyes, for example. This is a homology—a feature that two different living things inherit from a common ancestor.” The adjacent Hall of Biodiversity has aesthetically beautiful displays of a host of organisms, which appear designed to inspire awe and wonder among visitors. This venue includes evocative, nature-reverencing aphorisms and calls



Figure 4. The Hall of Biodiversity seeks to evoke a science-inspired sense of awe and wonder for the wild diversity of life on Earth. Photograph by Bron Taylor.

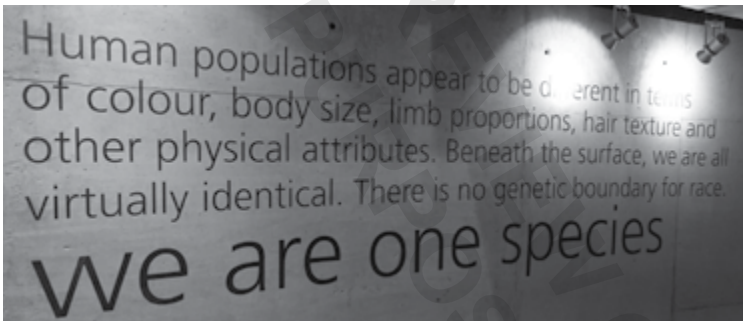


Figure 5. “We Are One Species” panel at the Maropeng educational center. Photograph by Bron Taylor.

for conservation from many of the world’s most famous scientists, artists, and environmental advocates (fig. 4).

In another example, the Cradle of Humankind, a UNESCO-designated World Heritage site near Johannesburg, South Africa, and several other nearby venues, trace the evolutionary story from its beginnings, through the emergence of *Homo sapiens* in Africa, to the present. The other sites include the Maropeng Theme Park,



Figure 6. A declaration “Oceans are Sacred” greets visitors in the Foyer of the Two Oceans Aquarium. Photograph by Bron Taylor.

which was constructed adjacent to the Cradle of Humankind to better handle and educate the site’s many visitors, and the Origins Museum at the University of the Witwatersrand (fig. 5). Although each venue stresses that human beings are all one species—no doubt in an effort to promote interhuman kinship and overcome the country’s racism-fraught history—the sites also make clear the kinship of *all* life. In this case, they do so by providing aphorisms from well-known figures and teachings from the country’s diverse African cultures, which are understood to promote science-grounded understandings of biological kinship and interdependence.

The Two Oceans Aquarium in Cape Town presents similar messages but in an even more overtly spiritual tone, greeting visitors immediately after admission with an artistic display proclaiming that the ocean is sacred (fig. 6). Adjacent photographs of whales and banners read: “Whales are central to the re-awakening

of our spiritually connected place within the living universe” (fig. 7). As with aquariums around the world, scientific understandings are mixed with calls for conservation and evocative messaging that we all belong to nature. The curators have designed the displays of marine organisms to evoke awe, wonder, and even love for marine life and the biosphere as a whole (figs. 8–9).

Many theatrical and documentary films further exemplify the ways the arts blend kinship feelings with scientific understandings and conservation messages. Some of the earliest among these were produced by Walt Disney, such as *Bambi* (1942), and the multiple Academy Award winner *True Life Adventures* series, which was produced and released from 1948 to 1960. Many of Disney’s animated

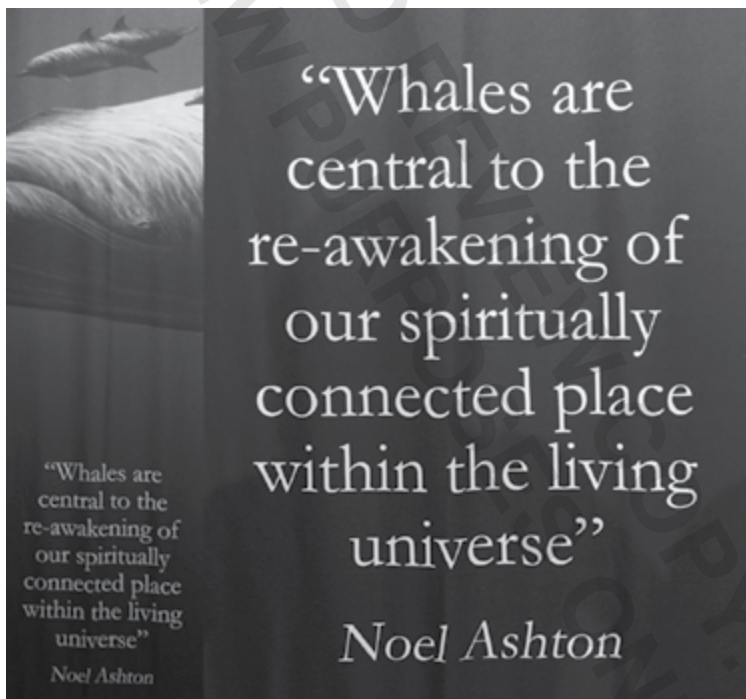


Figure 7. Whales are celebrated as creatures capable of awakening proper spiritual perceptions at the Two Oceans Aquarium. Images from the Two Oceans Aquarium. Photograph by Bron Taylor.

films blur the lines between humans and other species and urge respect for their habitats, which is another way to promote kinship feelings.¹⁹ Disney's tradition of documentary filmmaking intensified in 2008 when it launched Disneynature to foster "greater understanding and appreciation of the beauty and fragility of our natural world." Another executive embellished the idea with a comment often made in concert with kinship sentiments, that Disneynature's objective is to teach "the intrinsic value of nature."²⁰

Moreover, Disney movies have sought to portray indigenous cultures and worldviews in a positive light, including especially the idea that indigenous cultures are characterized by kinship feelings and corresponding mores.²¹ Similarly, in the (not-Disney-produced)



Figure 8. A girl is entranced by a ray at the Two Oceans Aquarium. Photograph by Bron Taylor.



Figure 9. A boy connects with marine organisms at the Two Oceans Aquarium. Photograph by Bron Taylor.

2009 film *Avatar* (2009), the director James Cameron metaphorically contended that indigenous peoples have intimate relationships and ethical responsibilities toward all forms of life.²² In 2017 at its Animal Kingdom theme park in Florida, Disney created a new area, Pandora—The World of Avatar. At this venue and throughout Animal Kingdom, in a variety of artistic ways, kinship and conservation take center stage. Indeed, rising to nearly 150 feet at the very center of Animal Kingdom is a sculpture modeled after the African baobab tree, which is sometimes referred to as the African tree of life. Into its trunk and branches, 325 animals have been sculpted—limbs, wings, and other body parts are entangled in a way that also seems to teach interconnection and kinship (fig. 10). Jane Goodall, who had been invited to tour the park on the cusp of its opening, was moved by the symbolism. And when she didn't find a chimpanzee in the tree—the species with which she felt special kinship—the artists added her favorite chimp overnight, just in time for the park's opening.

Herein I have sought to highlight the entanglement of the senses, arts, and sciences in the experience, expression, and



Figure 10. The Tree of Life is the Animal Kingdom's *axis mundi*, a sculptured metaphor for kinship with nonhuman organisms that also symbolizes ecological interdependence. Photograph by Bron Taylor.

promotion of perceptions of biological kinship, focusing especially on how kinship sentiments enjoin the conservation of Earth's biological diversity. I have been especially interested in showing how, for many, the sciences provide paths to kinship.

Coming to an understanding of the intrinsic relatedness of all life, however, leaves many unanswered questions, such as how do our obligations to near, distant, and future relatives differ?²³ Although there may be no easy answers to such questions, because (as evolutionary theory teaches) humankind shares the same cognitive and emotional repertoire, which includes biophilia and kinship feelings, we have the potential to wrestle together with such questions. In my view, such understandings and sentiments can provide a moral benchmark for compassionate and critical ethical analysis. I think, moreover, that if such perceptions, sentiments, and values continue to grow as a proportion of the human community, we might just find a path toward healthy and resilient socioecological systems.

A Personal Coda

As a scholar I am, foremost, an analyst of nature-human relations, fascinated with the ways people variously do or do not connect with nature, and how that shapes their lives and the living systems to which they belong. Although I rarely write about my own experiences, as someone who is insatiably curious about the experiences of others, I understand the curiosity of others about the writers behind words. So on occasion I have written more personally, as I did at the outset of my analysis of the sensory, artistic, and scientific paths to and expressions of kinship.

In the epilogue of *Dark Green Religion*, for example, I acknowledged my affinity for certain streams of the phenomena I had examined.²⁴ Several years later, I was asked to write about my journey to ecocentrism, to which I agreed with some trepidation because it necessarily required that I divulge some personal and sometimes embarrassing details.

In another essay, I even described an experience of communicating with trees that made me wonder whether I had an overly active imagination or an archetypal, animistic perception of tree consciousness.²⁵ Many of my more profound personal experiences, however, have taken place within marine ecosystems, wherein I have spent much of my life.

I once thought I knew sea lions and their behavior pretty well, given my experience working as a lifeguard on along the southern coast of California. During an expedition in the Galapagos Islands, however, while free diving, I had a more personal encounter when I found myself amid a large group of Galapagos sea lions. Not only did I swim with them on this occasion, but as I dove and twirled with them, they did that and so much more with ridiculous speed, agility, and grace. These were young sea lions for whom I was perhaps a not-yet-encountered, strange, oddly colored, and relatively clumsy semiaquatic mammal. Were they curious, showing off? Were they having fun playing with me, or was I just imagining that we were playing together?

I have twice been to the Hawaiian Islands. On the first occasion, I happened to run into a young man I used to work with while lifeguarding; he welcomed me to his beach house and to borrow his water toys. Immediately after I arrived at his place, I noticed whale spouts far offshore, grabbed a kayak, and paddled probably more than a mile and a half offshore, and then stopped a few hundred yards from them, quietly watching. After a while, with no warning, a huge humpback whale surfaced so close to me that it displaced a large volume of water, causing my small boat to rise and fall. Then, as it rose up next to me, I saw the whale looking straight at me and had a profound eye-to-eye experience similar to what many others have reported. This great mammal had an intelligence exotic to me, but was likely curious about what I was doing so far offshore in that little boat. Or was that perception in my imagination?²⁶

On the second occasion, I had an uncanny experience while swimming with a sea turtle. It is not unusual, of course, for humans

to swim near and sometimes alongside sea turtles. The turtles usually seem indifferent to our visitations. This encounter, however, was different. I ended up swimming for a long time with a young sea turtle. I would dive down and cruise alongside the turtle, and the turtle would often rise with me for air, as if wishing to stay in formation. As the time lengthened, I wondered whether more than curiosity was involved. Was the turtle feeling something akin to companionship? I was sad to have to peel away from the turtle, for I was much enjoying the company.

For a good reason, namely, epistemological humility, Western science warns against anthropomorphism. I am, therefore, skeptical when I find myself imagining what other organisms might be thinking, feeling, or communicating. Nevertheless, many evolutionary scientists and ethologists are challenging the dualistic assumptions that draw firm boundaries between our own cognitive and affective traits and those of other species.²⁷ It may be that if we can open up our full perceptual repertoire, affectively and rationally, to an understanding of the exotic intelligences of non-human species, it will be easier for us to grasp our kinship with all living beings.

NOTES

1. Stephanie Pappas summarized such research in "Mama Dolphins Sing Their Name to Babies in the Womb," *Live Science*, August 9, 2015, <https://www.livescience.com/55699-mother-dolphins-teach-babies-signature-whistle.html>.
2. John Muir, *Muir: Nature Writings*, ed. William Cronon (New York: Library of America, 1997), 296–97.
3. Marc Bekoff, *The Emotional Lives of Animals* (Novato, CA: New World Library, 2007), 50.
4. Bron Taylor, *Dark Green Religion: Nature Spirituality and the Planetary Future* (Berkeley: University of California Press, 2010). Space constraints require brevity here, but for other work of mine that takes on these themes, see "Resacralizing Earth: Pagan Environmentalism and the Restoration of Turtle Island," in *American Sacred Space*, ed. David Chidester and Edward T. Linenthal (Bloomington: Indiana University Press, 1995), 97–151; "Earth and Nature-Based Spirituality (Part One): From Deep Ecology to Radical Environmentalism," *Religion* 31, no. 2 (2001): 175–93; "Earth and Nature-Based Spirituality (Part Two): From Deep Ecology and Bioregionalism to Scientific Paganism and the New Age," *Religion* 31, no. 3 (2001): 225–45.
5. Frans Lanting, *Eye to Eye: Intimate Encounters with the Animal World* (Cologne, Germany: Taschen, 1997), 15.
6. These words are from Darwin's *Notebooks on Transmutation*, cited by Donald Worster in *Nature's Economy: A History of Ecological Ideas*, 2nd ed. (Cambridge, MA: Cambridge University Press, 1994), 180.
7. Darwin's views on the evolution of sympathy appear in Charles Darwin, *The Descent of Man, and Selection in Relation to Sex* (London: J. Murray, 1871). See also Dacher Keltner, *Born to Be Good: The Science of a Meaningful Life* (New York: W. W. Norton, 2009).

8. For an accessible source, see Albert Schweitzer, "The Ethics of Reverence for Life," *Christendom* 1 (1936), 225–39.
9. Aldo Leopold, *A Sand County Almanac & Other Writings on Ecology and Conservation*, ed. Curt Meine (New York: Library of America, 2013), 97.
10. Leopold, 115.
11. This quoted definition is from Edward O. Wilson, *Biophilia* (Cambridge, MA: Harvard University Press, 1984), 1.
12. Wilson, 130. Wilson was influenced by Leopold on this score, and many others, as well; he specifically acknowledged Gordon M. Burghardt and Harold A. Herzog Jr., "Beyond Conspecifics: Is Brer Rabbit Our Brother?" *BioScience* 30, no. 11 (1980): 763–68. With Stephen Kellert, Wilson produced a volume explicating the hypothesis: Stephen R. Kellert and Edward O. Wilson, eds., *The Biophilia Hypothesis* (Washington, DC: Island Press, 1993). From such theorizing, entirely new fields have emerged that have enhanced the plausibility of the biophilia hypothesis, including evolutionary psychology, environmental anthropology and especially the study of the knowledge systems of Indigenous peoples, and group selection theory.
13. See David Takacs, *The Idea of Biodiversity: Philosophies of Paradise* (Baltimore, MD: John Hopkins University Press, 1996); Bron Taylor, "Michael Soulé (1936–2020) on Spirituality, Ethics, and Conservation Biology," *Conservation Biology* 34 (2020): 1426–32; Curt Meine, Michael Soulé, and Reed Noss, "A Mission-Driven Discipline: The Growth of Conservation Biology," *Conservation Biology* 20 (2006): 631–51; and Bron Taylor, Guillaume Chapron, Helen Kopnina, Ewa Orlikowska, Joe Gray, and John J. Piccolo, "The Need for Ecocentrism in Biodiversity Conservation," *Conservation Biology* 34 (2020), 1089–96, <https://bit.ly/ecocentrism>.
14. Michael Soulé, "The Social Siege of Nature," in *Reinventing Nature? Responses to Postmodern Deconstruction*, ed. Michael Soulé and Gary Lease (San Francisco: Island Press, 1995), 141–42.
15. J. Baird Callicott, "Do Deconstructive Ecology and Sociobiology Undermine Leopold's Land Ethic?" *Environmental Ethics* 18, no. 4 (1996): 362.
16. Rachel Carson, *Lost Woods: The Discovered Writings of Rachel Carson*, ed. Linda Lear (Boston: Beacon Press, 1998), 160. Not incidentally, she dedicated her most famous book to Schweitzer; see Rachel Carson, *Silent Spring* (New York: Fawcett Crest, 1964).
17. Wilson, *Biophilia*, 74. Wilson attributed and paraphrased the notion of instruction by pleasing from the English literary icon Samuel Johnson, but he did not provide a citation.
18. Gregg Mitman, *Reel Nature: America's Romance with Wildlife on Film* (1999; Seattle: University of Washington Press, 2009); Adrian J. Ivakhiv, *Ecologies of the Moving Image: Cinema, Affect, Nature* (Waterloo, ON: Wilfrid Laurier University Press, 2013); Bron Taylor, ed., *Avatar and Nature Spirituality* (Waterloo, ON: Wilfrid Laurier University Press, 2013); Bron Taylor, "Rebels against the Anthropocene? Ideology, Spirituality, Popular Culture, and Human Domination of the World within the Disney Empire," *Journal for the Study of Religion, Nature and Culture* 13, no. 4 (2019): 414–54.
19. Examples include *Snow White and the Seven Dwarfs* (1937), the *Jungle Book* (1967), the *Little Mermaid* (1989), *Tarzan* (1999), and the *Lion King* (1994 and the 2019 remake), *Finding Nemo* (2003), and *Finding Dory* (2016). For more analysis, see Taylor, "Rebels against the Anthropocene?," 432–35.
20. Taylor, "Rebels against the Anthropocene?," 435.
21. As, for example, *Pocahontas* (1995) and *Brother Bear* (2003).
22. Bron Taylor, ed., *Avatar and Nature Spirituality* (Waterloo, ON: Wilfrid Laurier University Press, 2013).
23. I have discussed a broad approach to such questions elsewhere, as "Evolution and Kinship Ethics," Center for Humans and Nature (2017), <https://www.humansandnature.org/evolution-and-kinship-ethics>.
24. Taylor, *Dark Green Religion*.
25. Bron Taylor, "An Ecocentric Journey," *Ecological Citizen* 2, suppl. A (2019): 6–10, <https://bit.ly/ecojourney>. Bron Taylor, "Animism, Tree-Consciousness, and the Religion of Life: Reflections on Richard Powers' *The Overstory*," *Minding Nature* 12, no. 1 (2019): 42–47, <http://bit.ly/OverstoryBackstory>.
26. I first used the notion of exotic intelligence, which I borrowed from Freeman House, in "Salmon Speak ~ Why Not Earth?," an essay published in 2013 by the Center for Humans and Nature, available at <http://bit.ly/SalmonTalk>.
27. For an excellent example, see Carl Safina, *Beyond Words: What Animals Think and Feel* (New York: Henry Holt and Co., 2015).



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P L A N E T

With every breath, with every sip of water, with every meal, we are reminded that our lives are inseparable from the life of the world—and even the cosmos—in ways both material and spiritual. What are the sources of our deepest evolutionary and planetary connections, and of our profound longing for kinship?