

Together in Hard Hope

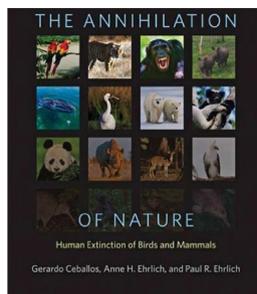
The Annihilation of Nature: Human Extinction of Birds and Mammals. Gerardo Ceballos, Anne H. Ehrlich, and Paul R. Ehrlich. Johns Hopkins Press, 2015. 208 pp., illus. \$29.95 (ISBN: 1421417189 cloth).

On Care for Our Common Home (Laudato Si'). Pope Francis. United States Conference of Catholic Bishops, 2015. 128 pp., illus. \$13.95 (ISBN: 1612195288 paper).

In 2013, amphibian conservation biologist Karen Lips published a sober commentary in a *Scientific American* blog post, entitled “What If There Is No Happy Ending? Science Communication as a Path to Change.” Lips’s fieldwork in Central America beginning in the late 1990s has been critical in bringing to light the devastating impact of the *Batrachochytrium dendrobatidis* fungus on amphibian populations. In her statement, she offered thoughts on what she called “hard hope”: “I am struggling to find a new message, one that moves past the death and destruction I have witnessed and beyond the feelings of helplessness and frustration, but one that is still honest and useful. I have been thinking about change and shifting baselines a lot recently, as I struggle to comprehend as everything—from frogs and fish, to bats, bees and forest trees—declines in number. I remind myself, ‘Nothing is as constant as change.’ It’s inevitable. This is the most honest and most hopeful thing I can say: evolution happens. Life is resilient.” Lips’s commentary has stayed with me, part of an expanding compendium of statements that I informally keep on the theme of hope amid unprecedented change. Some of the most poignant reflections are from those, like Lips, who have witnessed firsthand and know best the loss of life that marks our times.

But I also made note of a striking comment (the source of which seems

to have faded away into the Internet ether) made in response to Lips’s statement: “Sorry,” the online respondent stated, “but species biodiversity is so 1990s. It’s a Climate Change world now, and the life has been sucked out of the biodiversity advocacy movement. The only reason your average green-minded citizen cares about species extinction today is to the degree that that it underlines climate change advocacy.” Overlooking the casual lapses in the first two sentences—biodiversity embraces not just *species* diversity, and the phrase “biodiversity advocacy movement” is problematic in several ways—the comment still lodged like a sliver deep under the skin. It hit a nerve.



But why? Maybe I heard a scary hint of my own unplanned obsolescence, having devoted a good chunk of my own work (especially in the 1990s!) to biodiversity conservation. Had I and my cohort of devoted conservation biologists already become as passé as the Spice Girls, *Friends*, and Alan Greenspan’s “irrational exuberance”? Maybe I worried about the comment’s implication: that “climate change advocacy” might itself eventually prove to be just a momentary fad—“so 2010s.” Finally, though, I think I found the comment unsettling because of what it suggested: that we must choose between our several awful socioenvironmental crises or, more accurately, that we *have* a choice between the different faces of our one indivisible, wicked, global crisis.

For all my qualms, though, I recognized the point of the comment. As the urgency of climate disruption has intensified over the last two decades, we have had to apply an increasing share of our finite attentions to the climate-change aspect of the Big Crisis. However, even as the cloud cover of climate change overshadows the Earth and conservation scientists debate among themselves what the Anthropocene means for their craft, all the little live things (and the big live things, too) keep their claim on our consciousness. And there is evidence that its corner is again expanding. After surveying the climate crisis in *Field Notes from a Catastrophe: Man, Nature, and Climate Change*, journalist Elizabeth Kolbert was awarded the 2015 Pulitzer Prize for General Non-Fiction for *The Sixth Extinction: An Unnatural History*. The first wave of conservation biology may have come ashore, but a new wave builds, carrying with it the understanding that as we make our fraught way forward on the climate front, our efforts to conserve biological diversity must be part of any effective, systemic response.

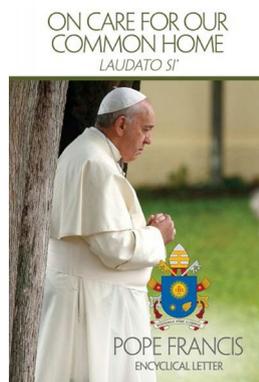
The two books at hand underscore the point. Reviews can make for strange book-fellows. But we have arrived at the moment in our species history when great channels of human thought, discourse, and concern must converge to address our incredible challenge. And so prominent scientific journals invite reviews of statements from the head of the Catholic Church and allied voices in other faith traditions. The statements of those religious leaders cite and summarize scientific publications. Ceballos and the Ehrlichs, conservation scientists of the first rank, voice the need “to communicate to the public and politicians the emotional side of the plight of biodiversity and to connect that predicament to human well-being.” It has come to this: The climatological and

biological crisis is also a moral crisis and vice versa.

The Annihilation of Nature is not a technical text. It aims for the heart. It expressly focuses on extinct and endangered birds and mammals, “the groups of animals with which most of us empathize.” The book opens with three succinct, up-to-date chapters on the basics of species diversity, natural extinction phenomena, and the human causes and consequences of contemporary extinctions. Paired chapters on extinct and endangered birds and extinct and endangered mammals follow. A chapter entitled “Why it all matters” emphasizes and explains ecosystem services. “Drivers of death” begins (as one might expect in an Ehrlich-coauthored book) with the $I = PAT$ equation and then summarizes the roles of the several drivers: human population and consumption, habitat loss and fragmentation, overharvesting, introduced species, broken migrations, toxic compounds, and climate disruption. A final chapter, “Beyond mourning,” describes the menu of positive conservation responses, from rewilding, protected areas, and captive breeding to translocation, sustainable use, and the rise of conservation nongovernmental organizations. The book ends with an appeal to address “the key drivers of extinction and environmental degradation: overpopulation and overconsumption” and the conventional economic paradigm of perpetual growth.

For long-time readers of the Ehrlichs, especially, this may seem like old wine. But this new bottle holds some new and different flavors. And it is meant for general consumption. Lavishly illustrated and clearly written, this is a book especially for the upcoming generation of citizen-conservationists. In some conservation circles, it has become unfashionable to offer lessons that (as the authors, quoting A. E. Housman, note) “are not sweet.” For those willing to wrestle with such lessons—and those whom you wish to encourage in their wrestling—this is accessible orientation.

For those willing to go even further, *Laudato Si'* provides more than just new wine; it points to a fundamental ethical reorientation and challenge, not only for the institution from which it has emerged but also for those of other faith communities—and for humankind in general. Drawing on its own vein of Catholic teaching on the stewardship of creation, on the insights of other Christian thinkers and other religious traditions, and on science and moral philosophy, Pope Francis has issued a statement for the ages. Highly anticipated when it was released in June 2015, *Laudato Si'* coincided with the planning for the December 2015 Paris Conference of Parties (COP21) climate negotiations. Therefore, much attention and analysis have involved the encyclical's direct relevance for climate ethics and policy. With that immediate round of scrutiny passing (and for the purposes of this review), we can now return to its remarkable discussions of the value of biological diversity.



Laudato Si' is, among other things, highly quotable. And in this case, one can imagine Pope Francis in dialogue with the authors of *The Annihilation of Nature*. What might the Pope say of their book's approach? For his audience, on this occasion, the Pope raises the ante: “It may well disturb us to learn of the extinction of mammals or birds, since they are more visible. But the good functioning of ecosystems also requires fungi, algae, worms, insects, reptiles, and an innumerable variety of microorganisms.” In one of

the encyclical's most powerful passages, Pope Francis states unequivocally: “Because of us, thousands of species will no longer give glory to God by their very existence, nor convey their message to us. We have no such right.”

Ceballos and colleagues only passingly invoke intrinsic value as a rationale for conservation, stating pragmatically that “it has proven most useful for conservation biologists to impress on people that the future of the human enterprise rests to a substantial degree of preserving as much biodiversity as possible.” Pope Francis not only goes there; he does so forcefully and in explicit support of field scientists: “Ongoing research should . . . give us a better understanding of how different creatures relate to one another in making up the larger units which today we term ‘ecosystems.’ We take these systems into account not only to determine how best to use them, but also because they have an intrinsic value independent of their usefulness.”

Given the authorship of these two volumes, the reader naturally comes to them wondering how deeply their views on human population growth will clash. Or, alternatively, one might hope to find if not concurrence, at least new opportunities for productive dialogue. Ceballos and colleagues are blunt: “Long-term hope lies only in shrinkage of Earth's human population and reduction of per capita material consumption of the already rich.” Pope Francis concurs vehemently on the latter theme, warning throughout of “the obsession with consumption,” especially among the world's privileged. But as regards population growth, the encyclical holds to a firm position: “Instead of resolving the problems of the poor and thinking of how the world can be different, some can only propose a reduction in the birth rate. . . . To blame population growth instead of extreme and selective consumerism on the part of some, is one way of refusing to face the issues.” On the face of it, this would seem to remain a matter of irreconcilable differences and

improbable discussions. However, it is notable that the encyclical's discussion of population is confined to one paragraph, embedded within an expansive context of environmental responsibility, justice, and integral ecology. *Laudato Si'* is informed by a much more sophisticated view of ecological science than the Catholic Church had in 1968, when Paul Ehrlich published *The Population Bomb*. On this essential point, fruitful dialogue seems unlikely. Still, the image I hold after reading these together is of potential discussants finally sitting together at the same table, albeit at far opposite ends.

At minimum, we can emphasize that potential and the common cause

that holds these two books together on our bookshelves. Since the long-ago days of the 1990s, more and more conservationist scientists have come to appreciate that success in conservation depends on forging healthy human relationships, communities, and economies; it is all about the connections. And we can do so without sacrificing the sacredness we find in life's diversity. Ceballos and colleagues recognize this when, at the conclusion of their book, they quote French naturalist Jean Dorst: "Nature . . . will only be saved if man shows it some love simply because it's beautiful. This is also part of the human soul." *Laudato Si'* concludes with "a prayer for our earth." It opens:

All-powerful God, you are present in the whole universe and in the smallest of your creatures. You embrace with your tenderness all that exists. Pour out upon us the power of your love, that we may protect life and beauty....

Across our differences, with our ever-changing priorities, in such a convergence of minds and hearts, we may find ourselves united in hard hope.

CURT MEINE

Curt Meine is a senior fellow with the Aldo Leopold Foundation and Center for Humans and Nature.

doi:10.1093/biosci/biw033