

At Our Mercy

The Tree of Life Now Depends on One Twig

[Elizabeth A. Johnson](#) January 23, 2014 - 4:11pm [3 comments](#) [Print](#)

In the previous issue of *Commonweal*, I explained how Charles Darwin's account of the origin of species revolutionized our understanding of nature and humanity's place in it (["Darwin's Tree of Life," January 24](#)). Many of his contemporaries held to the notion of special creation—each species designed by the Creator and descending from its original ancestor without variation over time. But Darwin posited something truly bold: that complex organisms evolved “not by means superior to...human reason [that is, God], but by the accumulation of innumerable slight variations.” The audacity of that theory was not lost on its author.

But Darwin knew it was sound. After all, he had done the hard work of traveling, observing, cataloguing, and then deciphering what most of us now take for granted: today's organisms evolved over eons from common ancestors. He didn't labor under the illusion that his theory would be swiftly adopted by the scientists of his day. Yet he held out hope that a future generation would come to share his vision of the interrelatedness and interdependency of all life on earth. In many ways, that has come to pass. The idea of natural selection has gained widespread acceptance. Scientific knowledge has advanced understanding of humanity's place in, and effect on, creation. Despite this awareness, we have failed utterly to protect our planet and those who share it with us. For Christians, this constitutes a profound break with God.

Loving life on earth is not foreign to Christianity. Indeed, it is supported by the tradition's beliefs about God as these are revealed in Scripture and condensed in the creed. (I expand on this in the central chapters of [Ask the Beasts](#), where I discuss the sacred character of the natural world in light of the indwelling of the Spirit, the incarnation of Jesus Christ, and the Creator God who is the beginning and goal of the universe.) Still, critics have rightly censured Christianity for long abetting the ecological crisis. Indeed, with some exceptions, Christian churches often choose not to face this calamity with the energy they spend on other matters. It's as though the planet were undergoing its agony in the garden, and we, the disciples of Jesus, are curled up fast

asleep. Waking up to our own role in this crisis will require a dramatic course correction, a reorienting of our ethical compass away from ourselves alone and toward all creation. In a word, ecological conversion requires profound humility.

Darwin can help. From a scientific perspective, human beings evolved as a twig on the tree of life. Out of colonies of single-celled creatures in the ancient seas came diverse species of creatures—plants, insects, birds, mammals. The mammalian branch grew into various hominid forms, and from one line of descent emerged humans. With all other species, we share a biological kinship encoded in our very cells. Yet our cognitive powers mark us as singular. With *Homo sapiens*, evolution has brought forth a creature able to understand the very process of evolution. And by virtue of their intellect, humans can massively affect the evolution of other species, for good or ill.

The extent and quality of this influence now goes beyond anything Darwin envisioned. The human species is having a dramatic impact on the evolution of the rest of the natural world—not simply by selective breeding of animals and plants, but by propelling vast numbers of other species toward extinction. Humans are accelerating natural selection by changing the environment so rapidly and variously that many species simply can't keep up. By any measure, our late-arriving species is a marvel. We have advanced capabilities to respond to other beings, to imagine the perspectives of others, to respond aesthetically to the beauty of nature, even to praise the Creator of that beauty. Yet despite these unique capacities, the human legacy is becoming the erasure of others on the tree of life.

From the beginning, the advent of humanity had momentous consequences for the planet. A bird's-eye view of its development is astonishing. *Homo sapiens* continuously elaborated new ways of interacting with the natural world: domesticating plants and animals, taming fire, forging metals into tools, building complex structures, and processing foodstuffs and skins in an array of skilled crafts. The Industrial Revolution accelerated human use of natural resources, with machines powered by fossil fuels doing what had been the hard, slow work of people and animals. For a time, earth could replenish the resources we used, but no longer; we are depleting them too rapidly. For a time, other species could largely regrow their populations after human predation. Not anymore. Humanity has become a geophysical force capable of raising the planet's temperature, thereby causing devastating droughts, floods, fires, storms, and rising sea levels. We have traumatized the atmosphere itself.

THERE ARE THREE mechanisms of destruction: overpopulation, consumption of resources, and pollution. From our first appearance sometime in the past one to two hundred thousand years until 1650 CE, humans grew to number about half a billion. Today there are about 7.1 billion of us. Predictions vary as to where this growth might top out—perhaps ten billion by the middle of this century, fifteen billion by the next. Technology may extend the ability of certain resources to support life, but earth's resources are not infinite.

While the question of how to control population growth has always been divisive, it is important to note that in recent decades the Catholic Church has endorsed the idea that it is legitimate to limit human births. Addressing the responsibility of married couples to determine the number of children they will have, the Second Vatican Council teaches in *Gaudium et Spes*:

Let them thoughtfully take into account both their own welfare and that of their children, those already born and those which the future may bring. For this accounting they need to reckon with both the material and the spiritual conditions of the times as well as of their state in life. Finally, they should consult the interests of the family group, of temporal society, and of the church herself.

In 1984, Pope John Paul II—while disavowing the use of artificial contraception—stated that the church “fully approves of the natural regulation of fertility and it approves of responsible parenting.” He continued, “This morally correct level must be established by taking into account not only the good of one’s own family, and even the state of health and the means of the couple themselves, but also the good of the society to which they belong, of the church, and even of all mankind.” If the good of future children, the material conditions of the times, and the interests of society are factors in weighing the ethical rightness of reproductive activity, then the good of the ecological world that sustains human society must also be relevant.

Of more significance for other species are the resources we deplete and despoil: topsoil, fresh water, vegetation—and prey species that serve as food sources for other creatures. Ecosystems can normally assimilate a certain degree of pollution. But the

level of human-generated pollution in many places now exceeds the capacity of natural systems to regenerate. This has devastating effects. Oil-soaked aquatic birds, collapsing bee colonies, tainted fish—all give mute testimony to pollution's ruinous effects. Rising temperatures are altering the habitats where species thrived for generations—including our own.

Darwin's theory holds that extinction plays an essential role in the process of evolution. In addition to the infinitesimally slow disappearance of species over millions of years, the earth has seen about five mass-extinction events. Scientific consensus increasingly holds that the planet is on the verge of, or even well into, a sixth. This time, however, death is not being caused by the breakup of continents, a chance asteroid collision, or a chain of naturally occurring climatic shifts. Instead, *we* are the cause of these deaths. The first documented case of extinction in modern times was that of the aurochs, a type of giant wild cattle. The last known herd lived in the Polish Royal Forest west of Warsaw. In 1557 there were about fifty. Even though they were considered precious and carefully protected, forty years later their numbers had dwindled to twenty-five. The last female died in 1627. Since that time, extinction has been proceeding rapidly—far faster than pre-human levels. Earth's normal background rate of extinction is about one species every year. Today, anywhere from 150 to 200 species become extinct *every day*, according to a 2010 calculation by the UN Environment Program. Current forecasts predict that as many as one-quarter to one-third of the world's animals and plants will be extinct within the next hundred years.

Why is human-induced extinction of species so terrible, given that the history of the planet is replete with large-scale die-offs from natural causes? Because the unparalleled scope and pace of extinction in our day could have been avoided. Species that should be alive are being eradicated by a disastrous failure of human wisdom and will. Rather than allowing their deaths to come naturally after millions of years of evolution, we are permanently terminating their lives.

The best analogy taken from the human world is murder. Most people die from sickness or old age, and some die from tragic accidents. But some have their life snuffed out prematurely by an act of violence. So too with nature. In the course of evolution, most species have died out in old age as a result of natural selection or suddenly by tragic accident. Today species are becoming extinct prematurely by the deliberate action of a

fellow species. It is not natural, and we could stop our murderous behavior if we loved the world enough.

The fossil record shows that biodiversity has always recovered. But it also indicates that recovery proceeds slowly. Following mass extinction, it can take 5 to 10 million years before an array of new species can evolve. This means that in the case of the current mass extinction, more than 200,000 generations of humans will have to live and die before levels of biodiversity comparable to those we inherited at the start of the twentieth century might be restored, if ever. If we change our behavior today, much of the current die-off could be slowed. But the crisis appears to be accelerating. We're driving species to extinction faster than new ones can evolve. The tree of life is thinning out.

WHY SHOULD ANYONE care? Self-interest, for one. If we continue to eradicate species and destabilize ecosystems, we're going to lose many of the planet's valuable services, from cleaning and recirculating air and water to providing sources for new medicines. The fact that the argument from self-interest does not galvanize action casts humanity's self-designation as *Homo sapiens*, or the wise human, in a deeply ironic light. But beyond self-interest, there is the importance of the living world itself as a reality of enormous promise. No one has developed this argument with more intellectual rigor and eloquence than the theologian John Haught.

Recall how *On the Origin of Species* lays out a compelling narrative of the way life has felt its way forward toward greater complexity, beauty, and sentience over billions of years. While there was no blueprint, Haught notes, humans discern a sort of direction to the story of life. "It is undeniable that matter has gradually become alive," Haught writes in *The Promise of Nature* and *The Cosmic Adventure*. "And within the last 200,000 years it has even begun to think and pray." Even before the appearance of humans, life displayed an anticipatory quality, reaching forward toward more sophisticated organization and function. It is no accident that this cosmic dynamism now finds a new blossoming in human beings, with our sense of adventure and our longing for fulfillment.

From the beginning, the universe was seeded with promise, pregnant with surprise. This promissory character of the natural world, according to Haught, comes from the

inexhaustible vitality of its Creator: “From a Christian theological point of view, life and evolution are the universe’s response to the presence and promise of divine persuasive love,” he argues in *Making Sense of Evolution*. And the story is not over yet. Because the totality of nature and its long history are God’s creation, we can assume that it holds meaning that we may never fully grasp. Before humans arrived, evolution had brought forth countless creatures, most of them having little or nothing to do with our own existence, yet loved by God. Who knows what further developments the future holds? Creation is not finished. That is why we have the responsibility to leave ample room for more unknown outcomes. “Even if these outcomes have little relevance to our own lives and interests at the present moment,” Haught writes, “a robust creation faith demands that we rejoice in the prospect that other natural beings have a meaning and value to their Creator that may be quite hidden from our human powers of discernment. This universe, it bears constant repeating, is God’s creation and not our own.”

To destroy other species carelessly is not only to violate the sacramental nature of creation; it is also to turn away from the promise embedded in all of creation. On a journey toward unimaginable fulfillment, the promise already glimpsed in nature’s beauty needs to be safeguarded for the sake of its future in God.

When we fail to protect our planet, when we hasten the demise of species, we erase testimony to divine goodness in the world. According to the theologian William French, our driving vast numbers of species toward extinction is idolatrous, brought about by policies that place lesser goods—in particular the gods of money and comfort—above God. In this light, we see that the ongoing destruction of life by human action, intended or not, amounts to a deep moral failure. By acts of commission and omission, we pull against the will of God. Ethicists have coined new words to name the sin: biocide, ecocide, geocide. Desecration is not too strong a designation.

In a message for the 1990 World Day of Peace, John Paul II declared that “*the ecological crisis is a moral issue*,” supporting that judgment with descriptive phrases such as “dramatic threat of ecological breakdown,” “uncontrolled destruction of animal and plant life,” “reckless exploitation,” and “the profound sense that the earth is ‘suffering.’” At root, he suggests, the problem stems from a failure to respect life. Often, the interests of production prevail over concern for the dignity of workers, while economic interests take priority over the good of individuals and even entire peoples.

In these cases, pollution or environmental destruction is the result of an unnatural and reductionist vision which at times leads to a genuine contempt for human beings. On another level, delicate ecological balances are upset by the uncontrolled destruction of animal and plant life or by a reckless exploitation of natural resources.

Social injustice and ecological degradation are two sides of the same coin. Both result from policies that reward greed. John Paul articulates a compelling new principle of moral behavior: "Respect for life and for the dignity of the human person extends also to the rest of creation, which is called to join humanity in praising God." That implies that moral consideration must be given to nonhuman species, and ascribes moral standing to ecological systems as a whole. John Paul invites us to apply the Catholic moral tradition—developed in terms of the dignity of the human person—to another set of living creatures.

LEADERS FROM MANY religious traditions urgently preach the need for people to mend their ways. The traditional term for such a change is conversion. In a broad sense, conversion is a continuous characteristic of the life of faith, an ever-deepening fidelity in relationship with God. As the New Testament term for conversion (*metanoia*) indicates, this also means a turning, a change of direction. We sin when we speed the demise of other species, reduce biodiversity, break up integrated ecosystems, and cut off future possibilities. Facing these evils in a spirit of repentance, we need the grace to be converted to God's way. We need an authentic spiritual conversion to the earth. Intellectually, this entails moving past an anthropocentric, mostly androcentric view of the world to a broader theocentric one. We must make room for other species in the circle of what's religiously meaningful. We must let go of a hierarchical dualism that prizes spirit over matter, and embrace a philosophy that intensely values physical *and* bodily realities as God's good creation. Emotionally, being converted to the earth means turning from the delusion of humanity as isolated from the rest of our environment to a deeply felt relationship with other beings as fellow creatures of God. Ethically, ecological conversion entails the view that a moral universe limited to human persons is no longer adequate. Recognizing that we are kin, we should behave not only with utilitarian intent—though that has its place—but also with intent to preserve and protect creation, precisely because of its intrinsic worth, because it is God's.

The time is past when humans could ignore the impact of their behavior on the ecological systems that support life on earth. In the context of Christian faith, ecological practices bespeak a profound turning to the God of life. As I write, many “green” initiatives are already underway—private and public recycling programs, a new ethic of energy efficiency, a preference for locally produced food. These are not enough to reverse the losses. But they *are* signs of hope. In the midst of the ruination of the tree of life, faith in the living God can spur us to action that makes a difference.

The story of the evolving world is not over. To a large extent, earth’s future is now at the mercy of human decision and indecision. If ever there was a sign of the times to be interpreted theologically, this is it. Do we want to be converted from dominion over the earth toward care for it? The question is not just an ascetic or moral one. Rather, it is an urgent invitation to align our hearts with God’s love so that all may have life. A flourishing humanity on a thriving planet in an evolving universe, all together filled with the glory of God—this is the vision that must guide us at this time of earth’s distress, to practical effect. Ignoring the crisis keeps people of faith and their churches locked into irrelevance while a terrible drama of life and death is played out around them. But living the ecological vocation sets us off on a great adventure of mind and heart, expanding the reach of our love.