

Preaching on the Wonder of Creation

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A sermon on the wonders of creation? "But I don't know if I believe in creation any more, since I've been studying evolution in school," "Well, you do still think that Earth is a wonderland, don't you? Is there anything you have learned in your biology class that has talked you out of that?" The college student home for Easter puzzles a moment. "Not really. You know, I was wondering during the last lecture before I left. Wow! How is it that DNA has generated such a wealth of biodiversity on Earth?"

Nature on Earth has spun quite a story, going from zero through several billion species, evolving microbes into persons. M. J. Benton concludes: "Analysis of the fossil record of microbes, algae, fungi, protists, plants, and animals shows that the diversity of both marine and continental life-increased exponentially since the end of the Precambrian."¹ Andrew H. Knoll celebrates "Earth's immense evolutionary epic": "The scientific account of life's long history abounds in both narrative verve and mystery."²

1. Wonderland Earth

The Genesis account is a kind of parable of a good earth, a garden earth abounding in creative genesis. A biologist realizes that prescientific peoples expressed themselves in such stories. "In the beginning when God created the heavens and the earth, the earth was a formless void and darkness covered the face of the deep, while a wind from God swept over the face of the waters" (Genesis 1:1, N&SV). This Wind of God inspires the animated Earth, and "the earth produces of itself" (Mark 4:28; Greek: "automatically"). The Earth arising from a formless void, inspired by a command to bring forth living creatures, generated in the seas, filling the land, multiplying and filling the Earth, eventuating in the appearance of humans, made of dust and yet remarkably special—all this is rather congenial with the evolutionary genesis.

Right at the beginning of the Bible, right at the creation, God is interested in sun, moon, stars, birds, fish, animals—before humans are even on earth. The days of creation are a series of divine imperatives, not so much fiats as commissions: "Let the earth put forth vegetation." "Let the earth bring forth living things according to their kinds" (Genesis 1:11,24). And that is what happened.

The Hebrews could already see that on their landscapes, but scientific natural history has greatly enlarged this extravaganza of life, always wonderful even when (by human standards) it is sometimes weird. There are organisms called vestimentiferans that live at the bottom of the ocean, drawing their life energy not from the sun but from thermal vents. Pillid beetles, about the size of a period on this page, have six legs, wings, a nervous system, a digestive tract, reproductive organs. Whales have hearts large enough to drive small cars inside them. There are more organisms living in your body than there are persons living on Earth. By recent estimates, there may be more forms of life living underground than above.

There are wonders in the skies above, and science opens those up, far exceed-

ing anything that the biblical authors could have imagined. Europa, Jupiter's largest moon, is in a gravitational tug of war of incredible dimensions, pulled in different directions by Jupiter and by the planet's other moons. This flexes the brittle outer surface into a criss-cross of dynamically changing straight and curved ridges, valleys, cracks, with bands of ice, generating heat that may melt lakes or oceans below. Saturn's little satellite Enceladus has so little gravity and orbits so deeply in Saturn's powerful gravity that there results a huge plume of ice-laden water that spouts from an overheated south pole region. Both these moons are like no place else in our solar system, perhaps like no place else in the universe. The principal wonder of our solar system, indeed the principal wonder of our universe, so far as we know, is this wonderland Earth.

A good planet is hard to find. Earth is something of an anomaly. Earth has a rather good star, the sun, which is stable, solitary, and situated about 28,000 light years from the center of our galaxy, in a relatively quiet part of the galaxy, about halfway between the quite active middle and the active outer parts of the galaxy. Deadly radiation from supernovae explosions or bursts of intense X-ray and ultraviolet radiation are unlikely. The solar neighborhood does have a relatively high abundance of the heavier elements produced from supernovae, all those heavier than hydrogen and helium.

Located at a felicitous distance from the sun, Earth has huge amounts of liquid water, seven oceans covering about three-quarters of its surface. Aqua would have been a better name than Earth. On Earth there is atmosphere, a suitable mix of elements, compounds, minerals, and an ample supply of energy. Radioactivity deep within the Earth produces enough heat to keep the tectonic plates of its crust constantly mobile in counteraction with erosional forces, and the interplay of such forces generates and regenerates landscapes and seas—mountains, canyons, rivers, plains, islands, volcanoes, estuaries, continental shelves. Earth's moon produces tides, significant in the evolution of life.

"It appears that Earth got it just right," conclude Peter D. Ward and Donald Brownlee.³ All this results in an anomalous, fortuitously good location—though cosmologists and biologists still find it hard to say whether the Earth is lucky, likely, or inevitable. William C. Berger does call Earth a "perfect planet." "I believe we can all agree that we live on a glorious planet, and that our intellectual achievements have been quite amazing."⁴ Stephen Jay Gould finds Earth the scene of "wonderful life."⁵

2. Beasts and Swarming Things

Biblical faith has the conviction that species originate in God's wish. God ordered earth to "bring forth swarms of living creatures" (Genesis 1:20). "Swarms" is the Hebrew word for biodiversity! Adam's first job was, we might say, a taxonomy project, naming the animals. Let the earth bring forth biodiversity. Bible writers are principally concerned with the culture that Israel established on their promised land, but they regularly appreciate the wild nature that surrounds them on their landscape.

Praise the Lord from the earth you sea monsters and all deeps, fire and hail,
snow and frost, stormy wind fulfilling his command! Mountains and all
hills, fruit trees and all cedars! Beasts and all cattle, creeping things and
flying birds! (Psalm 148:7-9)

Who has cleft a channel for the torrents of rain, and a way for the thunder-bolt, to bring rain on a land where no man is, on the desert in which there is no man; to satisfy the waste and desolate land, and to make the ground put forth grass? (Job 38:25-27)

God not only sends rain on the just and the unjust; God sends rain to satisfy wild-lands. God not only blesses humans; God blesses *the* desolate wastes. These fierce landscapes, sometimes supposed to be ungodly places, are godly after all. Under God, wild asses, eagles, goats, lions, badgers (conies) are born free.

Who has let the wild ass go free? Who has loosed the bonds of the swift ass, to whom I have given the steppe for his home, and the salt land for his dwelling place? He scorns the tumult of the city; he hears not the shouts of the driver. He ranges the mountain as his pasture, and he searches after every green thing. (Job 39:5-8)

Is it by your wisdom that the hawk soars, and spreads his wings toward the south? Is it at your command that the eagle mounts up and makes his nest on high? On the rock he dwells and makes his home in the fastness of the rocky crag. Thence he spies out the prey; his eyes behold it afar. His young ones suck up blood; and where the slain are, there is he.... Shall a faultfinder contend with the Almighty? He who argues with God, let him answer it. (Job 39:26-40.2)

The high mountains are for the wild goats; the rocks are a refuge for the badgers. ... The young lions roar for their prey, seeking their food from God ... O Lord, how manifold are thy works! In wisdom hast thou made them all; the earth is full of thy creatures. (Psalm 104:18-24)

The Bible writers know quite a menagerie: In wilderness deserts are "fiery serpents and scorpions" (Deuteronomy 8:15; Numbers 21:6), "jackals," "hyenas," "owls," "kites," "ravens," "porcupines," "ostriches," "wild goats (satyrs)," "wild beasts" (Isaiah 34). That includes those "creeping things" for which God is praised (Psalm 148:7-9). Here we might recall the biologist J.B.S. Haldane's famous remark (perhaps apocryphal) when asked by theologians what he had learned about the Creator from studying creation in biology, that God had "an inordinate fondness for beetles."⁶ Nor does God forget the flora: "The trees of the Lord are watered abundantly; the cedars of Lebanon which he planted" (Psalm 104:16).

We know that biodiversity today much better than did they, but we may well suppose that Bible writers would only have rejoiced in this fuller creation. There are so many species on Earth that scientists in fact do not know how many. Not long ago, we thought there were about three million, with about half these identified, 4100 species of mammals, 8700 birds, 8300 reptiles, 3,000 amphibians, 23,000 fishes, 800,000 insects, over 300,000 green plants and fungi, and many thousands of protozoans. Over recent decades, estimates have been pushed steadily upward, owing to new discoveries and better taxonomy. Now estimates range from ten to a hundred million. Many of these unknowns are invertebrates, but we are still enlarging the array of vertebrates,

as well as plants. In 2002 biologists in New Guinea Foja Mountains found over forty new species, including several new birds and a new echidna. Systematists all agree that there are more species which scientists have yet to describe than those already described. If diversity of life is any indicator, this is more of a wonderland Earth than we ever thought before.

3, *Land of Promise, Planet with Promise*

Loving the land is a central theme of the Hebrew Bible. Biblical faith is from the start a landed faith. Israel is given their "promised land"—"a good and broad land, a land flowing with milk and honey" (Exodus 3:8; Deuteronomy 27:3). The land is watched over by God's care (Deuteronomy 11:11-12). Walter Brueggemann takes "land as a prism for biblical faith." "Land is a central, if not *the central theme* of biblical faith."⁷ "The land" is both geographical and symbolic. Yearning for a sense of place is a perennial human longing, of belonging to a community emplaced on landscape; and Israel's sense of living on a land given by God, of human placement on the earth, can yet speak to the landlessness, and lostness, of modern persons. All peoples need a sense of "my country," of their social communities in place on a sustaining landscape they possess in care and in love.

Israel's promised land is their corner of a larger garden earth on which humankind (symbolized in Adam and Eve) have been placed, in primordial time. "The Lord God took the man and put him in the garden of Eden to till and keep it" (Genesis 2:15). By this account humans are "Earth-gardeners." The apex of the creation is man and woman, made of mud, made in the image of God, incarnate and set on their garden earth. Humans prove to be the great challenge to God, the contentious creature, but the world, and their promised land, is habitat not only for humans but for the myriads of creatures—from "great sea monsters" to "birds," "beasts," and "creeping things"—which, repeatedly, God finds "good" and bids them to "be fruitful and multiply and fill" the waters, the earth, the skies (Genesis 1:20-22). The fauna is included within the Hebrew covenant. The covenant renewed in the days of Noah—after a natural disaster with divine provision for saving the wild creatures—is quite specific about this:

Behold I establish my covenant with you and your descendants after you, and with every living creature that is with you, the birds, the cattle, and every beast of the earth with you. (Genesis 9:5)

God said, "This is the sign of the covenant which I make between me and you and every living creature that is with you, for all future generations: I set my bow in the cloud and it shall be a sign of the covenant between me and the earth." (Genesis 9:12-13)

"Keep them alive with you" (Genesis 6:19). That certainly sounds like God loves wild nature. To use modern terms, the covenant was both ecumenical and ecological. In theocratic Israel, animals belonged to God, as indeed did all properly. "For every beast of the forest is mine, the cattle on a thousand hills. I know all the birds of the air, and all that moves in the field is mine" (Psalm 50:10-11). The flood story, in fact, seems by our contemporary standards, a little inhumane: God drowns the

human world, but saves the beasts. That aside, God seems much concerned that the biological wonders of the Promised Land continue.

Both Judaism and Christianity, emerging from Judaism, became more universalist and less land-based. In the Diaspora, the Jews were a people without a country; and, though this was widely regarded as tragic, Judaism remains a faith that transcends residence in Palestine. Christianity has often been regarded as more spiritual and less material, more universal and less provincial than its parental Judaism. Both these movements out of a geographically particular promised land, which are sometimes thought to make the land irrelevant to faith, can as well make every people residents of a divinely given landscape.

In that sense, these faiths may have been mistaken when they became uprooted from encounters with the land. Rather, Christians and Jews ought to have re-rooted in whatever the landscapes of their residence. In this sense, the Jewish vision of a promised land is inclusive, not exclusive. The American landscape with its purple mountains' majesties, fruited plains, its fauna and flora from sea to shining sea is divinely created, no less than Canaan from the Negev to Mount Hermon. John Muir, recalling the Psalmist, sings: "The forests of America, however slighted by man, must have been a great delight to God; for they were the best he ever planted."⁸

Landscapes around the globe, east and west, north and south, on six continents (though not the seventh, which has its own distinctive wonders) have proved homelands that peoples can come to cherish and on which they can flourish. Viewing Earthrise from the moon, the astronaut Edgar Mitchell, was entranced:

Suddenly from behind the rim of the moon, in long, slow-motion moments of immense majesty, there emerges a sparkling blue and white jewel, a light, delicate sky-blue sphere laced with slowly swirling veils of white, rising gradually like a small pearl in a thick sea of black mystery. It takes more than a moment to fully realize this is Earth ... home.

Mitchell continued, "My view of our planet was a glimpse of divinity."⁹ The astronaut Michael Collins recalled being earthstruck: "Earth is to be treasured and nurtured, something precious that *must* endure."¹⁰

The evolution of rocks into dirt into fauna and flora is one of the great surprises of natural history, one of the rarest events in the astronomical universe. Earth is all dirt, we humans too arise up from the humus, and we find revealed what dirt can do when it is self-organizing under suitable conditions. This is pretty spectacular dirt. Really, the story is little short of a series of "miracles," wondrous, fortuitous events, unfolding of potential; and when Earth's most complex product, *Homo sapiens*, becomes intelligent enough to reflect over this cosmic wonderland, everyone is left stuttering about the mixtures of accident and necessity out of which we have evolved.

For some the black mystery will be numinous and signal transcendence; for some the mystery may be impenetrable. Perhaps we do not have to have all the cosmological answers. Meanwhile, nobody has much doubt that this is a precious place, a pearl in a sea of black mystery. Even Edward O. Wilson, a secular humanist, ever insistent that he can find no divinity in, with, or under nature, still exclaims: "The biospheric membrane that covers the Earth, and you and me, ...is the miracle we have been given."¹¹

We can, if we insist on being human-centered, say that it is all valueless except as our human resource. God gave us a promised land, this Earth, to drip milk and honey into our mouths. But we will not be valuing Earth objectively until we appreciate this marvelous natural history. This really is a superb planet. Ancient Palestine was a promised land. Today and for the century hence, the call is to see Earth as a planet with promise, destined for abundant life.

4, *Nature as Grace: The Awe-full Sublime*

Nature encountered in awe, wildlands, like sea and sky, invite transcending the human world and experiencing a comprehensive, embracing realm. Forests can serve as a more provocative, perennial signature of time and eternity than many of the traditional, often outworn, symbols devised by the churches. Mountaintop experiences, the wind in the pines, a howling storm, a quiet snowfall in wintry woods, solitude in a grove of towering spruce, an overflight of honking geese—these generate "a sense sublime of something far more deeply interfused ... a motion and spirit that impels... and rolls through all things. Therefore I am still a lover of the meadows and the woods, and mountains."¹²

One place biology and religion have increasingly joined in recent years is in admiration for this marvelous planet that we inhabit. That respect sooner or later passes over to a reverence. No other species can be either responsible for or religious toward this planet, but *Homo sapiens* reaches a responsibility that assumes spiritual dimensions. In a planetary, environmental age, spirituality requires combining nature and grace at new levels of insight and intensity. Nature is grace, whatever more grace may also be.

Nature is sometimes said to be indifferent to life, and the evolutionary processes may be said to be blind. But that cannot be the whole truth on an Earth that has been speciating for three and a half billion years, going from zero to some ten or more million species today, passing through a billion (or more) species en route. The geophysical laws, the evolutionary and ecological history, the creativity within the natural system we inherit, and the values these generate, are, at least phenomenally, the ground of our being, not just the ground under our feet. Theologians may wish to demur that noumenally, God is the ground of being, but "ground" is an earthy enough word to symbolize this dimension of Awe-full depth where nature becomes charged with the numinous.

When Earth is encountered as archetype, as spontaneously self-organizing, as generator of life, not merely as resource, but as Source of being, the natural world starts to become a sacrament of something beyond. The deep woods has a way of spontaneously reenchanting itself. Forests are not haunted, but that does not mean that there is nothing haunting about forests. Perhaps the supernatural is gone, but here the natural can be supercharged with mystery. Science removes the little mysteries (how acorns make oaks which make acorns) to replace them with bigger ones (how and why the acorn-oak-acorn loop got established in the first place).

Thanks to the biochemists, molecular biologists, geneticists, botanists, ecologists, forest scientists, we know how this green world works. But is this an account that de-mystifies what is going on? Moses thought that the burning bush, not consumed, was quite a miracle. We hardly believe any more in that sort of supernatural miracle; science has made such stories incredible. What has it left instead? Forests perpetu-

ally perishing, perpetually renewed for millennia. A self-organizing photosynthesis driving a life synthesis that has burned for a billion years, life as a strange fire that outlasts the sticks that feed it.

This is, one could say, rather spirited behavior on the part of secular matter, "spirited" in the animated sense, in the root sense of a "breath" or "wind" that energizes this mysterious, vital metabolism. These bushes in the Sinai desert, these cedars of Lebanon, these forests across America, the best God ever planted—all such woody flora are hardly phenomena less marvelous even if we no longer want to say that this is miraculous.

Indeed, in the original sense of "miracle"—a wondrous event, without regard to the question whether natural or supernatural—the phenomenon of photosynthesis with the continuing floral life it supports is the secular equivalent of the burning bush. The bush that Moses watched was an individual in a species line that had perpetuated itself for millennia, coping by the coding in its DNA, fueled by the sun, using cytochrome c molecules several billion years old, and surviving without being consumed.

Loren Eiseley, surveying evolutionary history, exclaims, "Nature itself is one vast miracle transcending the reality of night and nothingness."¹³ Ernst Mayr, one of the most celebrated biologists of the last century, impressed by the creativity in natural history, says, "Virtually all biologists are religious, in the deeper sense of this word, even though it may be a religion without revelation. ...The unknown and maybe unknowable instills in us a sense of humility and awe."¹⁴ The sublime is never really far from the religious, since the sublime takes us to the limits of our understanding, and we stand in awe at the given, the gift that is nature.

Let's continue the conversation with which we began: "You do think Earth is a wonderland, don't you?" "Yes, indeed, generating teeming billions of creatures!" "And how many of those billions of creatures can wonder at the wonderland Earth they inhabit?" "Well, I suppose those of only one kind: *Homo sapiens*, the wise species." There is no wonder present apart from the human coming, since we do not believe that *Rhododendron* shrubs or foxes have the capacity for such wonder. Still, that at which we wonder is out there; we can see it. "If that's true, if only one species can see what is wonderful out there, then that one ought to, don't you think?" Earth, a wonderland, does have a remarkable scribe who can record the beauty, the fascination, and the mystery. That is beginning to sound like an imperative to preach the wonders of creation.

Notes

1. M. J. Benton, "Diversification and Extinction in the History of Life," *Science* 268 (7 April 1995): 52-58.
2. Knoll, Andrew H., *Life on a Young Planet* (Princeton: Princeton University Press, 2003), xi.
3. Peter D. Ward and Donald Brownlee, *Rare Earth: Why Complex Life Is Uncommon in the Universe* (New York: Copernicus; Springer-Verlag, 2000), 265.
4. William C. Berger, *Perfect Planet, Clever Species: How Unique Are We?* (Amherst, NY: Prometheus Books, 2003), 3.
5. Stephen Jay Gould, *Wonderful Life: The Burgess Shale and the Nature of History* (New York: Norton, 1989).
6. Recalled in G. Evelyn Hutchinson, "Homage to Santa Rosalia, or Why Are There so Many Kinds of Animals," *American Naturalist* 93 (1959): 145-159.
7. Walter Brueggemann, *The Land* (Philadelphia: Fortress Press, 1977), 3.

8. John Muir, *Our National Parks* (Boston: Houghton Mifflin, 1901), 331; Psalm 104.16.
9. Edgar Mitchell, quoted in Kevin W. Kelley, ed., *The Home Planet* (Reading, MA: Addison-Wesley, 1988), 42-45.
10. Michael Collins, "Foreword," in Roy A. Gallant, *Our Universe* (Washington, DC: National Geographic Society, 1980), 6.
11. Edward O. Wilson, *The Future of Life* (New York: Alfred A. Knopf, 2002), 21.
12. William Wordsworth, "Lines Composed a Few Miles above Tintern Abbey" (1798).
13. Loren Eiseley, *The Firmament of Time* (New York: Atheneum, 1960), 171.
14. Ernst Mayr, *The Growth of Biological Thought* (Cambridge, MA: Harvard University Press, Belnap Press, 1982), 81.