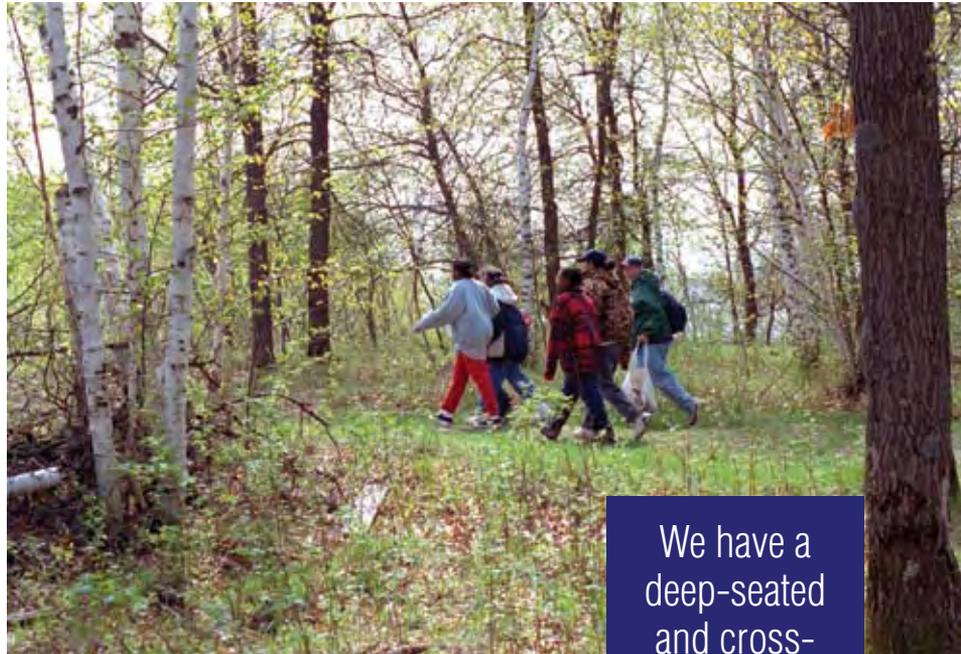


# Repairing the Breach: Reconnecting Students *With* Nature

**T**he great Creation narratives of Genesis depict human beings as created by God (Genesis 2:7), and placed in a garden stocked with plants and animals (vs. 8). They were immediately given stewardship over creatures of sea, sky, and land (1:26, 28). Significantly, Adam's first recorded action was to name each beast and bird (2:18), a task that implies intimate knowledge of these creatures and recognition of their value.<sup>1</sup>

These observations underpin, I believe, two essential facts about the relationship between humanity and nature. First, *we need nature*. We have a deep-seated and cross-cultural affinity for the natural world, which Harvard biologist Edward O. Wilson has termed *biophilia*.<sup>2</sup> While Wilson interprets *biophilia* in purely evolutionary terms, the Christian educator recognizes the same affinity as rooted in creation. The present issue of THE JOURNAL OF ADVENTIST EDUCATION was assembled around this need for nature, and it documents the growing scholarly evidence supporting the educational and spiritual benefits of experiences in the natural world.

The second and equally important fact is this: *Nature needs us*. To be sure, most species do not directly interact with humans; most beetles would probably get along fine if we vanished from the planet, and many species, if they could think and speak, would probably rejoice at our disappearance



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(given our dismal track record in caring for them)! However, given the unquestionable power that modern human beings have over the world's ecosystems, nature surely needs us to exercise our power faithfully—as good stewards, or caretakers, of God's creation. Thus, nature needs us to *care*.

Unfortunately, the trends of modern Western society conflict with both of these profoundly important facts. We have heavily modified the natural world, creating it in our own image and severely degrading important natural ecosystems

BY H. THOMAS GOODWIN

## Nature needs us to care.

such as native prairies, tropical rain forests, and coral reefs. Humans now even appear to be influencing the world's climate system through massive production of greenhouse gases. Further, we spend almost all of our time living, working, playing, traveling—and teaching and learning—within the comforts of a manmade environment, often spending little if any time in wild places. Many children (and adults!) are therefore essentially illiterate about the natural world around them, having replaced *biophilia* with *technophilia*. How, then, will we hear and observe the praise God's creatures give to Him? And why would we care for these creatures if we know nothing about them?

Matthew Sleeth, a Christian physician who has become a spokesman for Christian environmental awareness, illustrates this illiteracy by telling about a presentation he did for a group of three dozen New England teens. All but two immediately identified a Hummer when shown a picture of this oversized sports utility vehicle. In contrast, only two teens could correctly identify a sugar maple leaf—even though the sugar maple is a common tree in the New England forests, the source of maple syrup, and the national symbol of Canada, just a few

But how do we do this? How can Adventist educators help “repair the breach”

between our students and God's creation? While no single solution will probably work for all, the remainder of this article suggests three principles for working toward this worthy goal:

1. Encourage direct, meaningful experience with nature;
2. Improve science teaching to more effectively convey the connectedness and human relevance of nature; and
3. Consciously articulate (and model) a biblically grounded ethic that recognizes the worth of all creation, including that which may offer no direct benefit to humans.

The first two principles apply to both secular and Christian educators; the last principle is the privileged domain of faith-based teachers. Let's consider each in turn.

### Encourage Direct, Meaningful Experience With Nature

Many children are incipient naturalists—given a chance, they enjoy catching insects, watching animals and birds, or building a fort in the woods. Unfortunately, many children don't have (or take) these opportunities. Given the comforts of air conditioning, playing a computer game in the house may seem more appealing than catching frogs in the pond while swatting mosquitoes; and parents, understandably fearful of pathological strangers, keep their children indoors (or at least within the yard). The naturalist impulse thus lies dormant—or gets crushed altogether.

Given our goal to “reconnect” students with nature, parents and educators have a rich opportunity to help children and youth (re)discover these simple pleasures. Start early with



miles to the north. Sleeth writes, “If this is our Father's world, maybe we should pay more attention to it.”<sup>23</sup>

Bridging this chasm between humankind and nature—repairing the breach, to borrow a biblical phrase—certainly is worthy of our best efforts as Christian educators. We will help our students educationally, psychologically, and spiritually when we plan ways for them to reconnect with nature—God's second book—and experience the intellectual stimulation, personal wonder, and transcendent joy that God's creation brings to us. We will also help shape future citizens who better understand and care about all of God's creation, persons who will be more likely to choose lifestyles and advocate policies that seek to preserve the Earth's ecosystems. A few of these young people will even find their calling, and commit to a profession in resource management or conservation.





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unforced, discovery-based experiences in the natural world. Encourage children to explore the woods and build forts. Visit the seashore or a zoo. Support hobbies such as birding or rock collecting.<sup>4</sup>

While many of these activities may best be carried out in less-structured learning environments, such as at home, innovative teachers can encourage direct contact with nature in the classroom. Set up a bird feeder outside the window, and have students record what kinds of birds visit at different times of year. Guide students in making a labeled collection of leaves, insects, shells, fossils, or rocks. Use a simple microscope to inspect and document life in a drop of pond water. The opportunities, of course, are endless.



These experiences are especially critical for younger children, but direct contact with nature may be formative even in the college years. As a personal example, I chose to add a second major in biology (my first major was theology), in part because I was awed by the beauty and complexity of life in a simple woodlot one summer morning before my senior year in college. I subsequently pursued a career in biology. Fourteen years of college teaching experience has confirmed this commitment, as many students have expressed appreciation for lab activities or field courses that connect them with nature. Such experience does more than convey information; it allows students to encounter the joy, mystery, and wonder of God’s creation.

### Improve Science (Especially Biology) Teaching

As we seek to help reconnect our students with nature, part of the solution must be improved science teaching, especially biology, in order to effectively communicate the interconnectedness and human relevance of the natural world—a task ironically complicated by the success of modern science.<sup>5</sup> The exponential growth and daunting complexity of biological knowledge has led to increased specialization and fragmentation, making it difficult for teachers (and students) to discover the fundamental, unifying themes and human value of nature. Overwhelmed by the sheer mass of specialized knowledge, introductory students may develop little sense for why they should care about God’s creation—and may lose interest altogether in science.

How do we engage students in science, given the overwhelming complexity of the subject? Edward O. Wilson draws on his long teaching career at Harvard to offer five broad principles. These principles apply most directly to educators at the college and advanced high school levels, but can be adapted to lower grade levels as well.

1. *Teach top down, beginning with the overarching, general concepts and then moving to the particulars.* This helps students put specific knowledge in a context that makes it meaningful. For the Christian educator, for example, the broadest overarching concept relevant to science education is creation—the cosmos is God’s handiwork, not simply the product of time, chance, and natural law.

2. *Relate scientific knowledge to other disciplines, especially the humanities, emphasizing the connectedness of all knowledge.* Such connections allow students to find multiple “hooks” for learning and show the unity of knowledge about God’s world. As an example, the science of ecology (the study of relationships between living things and the environment) readily interfaces with disciplines like economics, political science, and theology.

3. *Focus on problem solving rather than on specific facts or disciplines.* This approach also helps students see the connections across disciplines and fosters the careful thinking needed to

address many of the complex problems facing modern society. As an example, solving most conservation problems depends as much (or more) on effectively addressing sociological, political, and economic issues as on the application of sound biological knowledge.

4. *Display passion for what you do—a genuine love for nature—and encourage this passion in your students.* As all teachers realize, students are more likely to learn and become interested in a subject when the teacher displays a deep interest in it. Give them a chance to “catch” your passion for God’s creation!

5. *Encourage students (especially those planning to pursue a career in the sciences) to pursue a T-shaped approach to learning:* gain a general understanding of a broad range of topics (the top of the T), but then go deeply into one area of particular personal interest (the vertical shaft of the T). This approach helps shape informed citizens with broad, relevant knowledge about nature, as well as effective professionals with specialized knowledge in specific areas of need.<sup>6</sup>

Wilson’s suggestions transfer readily to Christian education. Science teachers at Adventist academies and colleges face the same challenges as our secular colleagues—helping students to both grasp the broad, interconnecting themes in nature and to achieve mastery of appropriate technical detail, while leading them to genuinely appreciate the natural world. We must strive to teach science well, in light of the explosive growth of increasingly detailed and complex knowledge. Wilson’s suggestions offer a good place to begin.

However, Christian educators must place this endeavor in a different framework and infuse it with different meaning. Wilson, working in a thoroughly secular context, believes that “Scientific knowledge, humanized and well taught, is *the* key to achieving a lasting balance in our lives.”<sup>7</sup> Such knowledge, he believes, will lead students to understand *why* they should care about nature, leading to choices more in harmony with natural rhythms. But scientific facts—no matter how well taught—are insufficient to “repair the breach” between our students and God’s creation. As a Christian educator, I believe we must do more: articulate and model a biblically informed *ethic* that properly recognizes the inherent value of creation. Let’s look at this principle.

#### Foster a Biblically Informed Ethic

Improved science teaching is surely important as we seek to

reconnect students with the created world; people do tend to value nature more when they understand how natural systems work, and why they are relevant to human well-being. However, scientific knowledge alone can never support a proper ethical stance toward creation, an attitude that recognizes its inherent meaning and value. Indeed, a secular scientific perspective typically views all of nature, including humankind, as solely the product of time, chance, and necessity in a universe blind to humanity’s concerns, hopes, or fears. In this view, nature just is—it has no inherent meaning or value. We may arbitrarily assign value to it because we happen to like it, or because it meets our needs, but such value is merely a preference, not a moral obligation.

Christian biologist Fred Van Dyke and his colleagues judge this as the “great failure of modern environmental ethics” since the “ultimate value of creation can never be found within the creation itself.”<sup>8</sup> In contrast to this human-centered ethic, the Bible teaches that creation has value because *God* calls it good (Genesis 1:10, 12, 18, 21, 25, 31). Even crea-

tures that have no apparent use to humans have value to God. Indeed, in His majestic answer to Job’s complaint, God “seems to take positive glee in pointing out how utterly and awesomely useless (to us) are some of the creatures he has made,”<sup>9</sup> creatures such as Leviathan and Behemoth.

How can Adventist educators help “repair the breach” between our students and God’s creation?



Van Dyke and colleagues urge Christian colleges to apply this theological perspective to the core of their science teaching, to teach a “repentant science” that leads students to “celebrate creation and not merely measure it.”<sup>10</sup> Such teaching seeks to produce more than head knowledge or new agendas—it seeks to form new people because “the

Bible never considers a truth to be known until it controls the life of the one who hears it.”<sup>11</sup> The result will be young people who not only understand God’s creation, but who also value and care for it because it is God’s creation.

How might we teach in this way? Although I am just beginning to explore this question, two points seem clear. Firstly, teachers and departments can intentionally open up space in individual courses and departmental curricula to directly articulate and explore a biblically based ethic of “creation care.” Most Adventist colleges, at least in North America, teach a course that explores the interface between the biblical teaching about creation and biology. This course typically focuses on the creation-evolution debate, but it could readily be broadened to consider the implications of the doctrine of creation for other areas of biology, including environmental stewardship. I have experienced encouraging initial results from my attempt to do so in this class.

Second, because our goal is to help our students embody (and not simply conceptualize) an ethic that genuinely values creation, Adventist educators will create opportunities to model and to encourage their students to embrace and practice ethical ways of living. Adventist teachers have many occasions to model, at the personal and organizational levels, lifestyles and policies that respect the value of God’s creation, although there is much room for improvement. In addition, some courses lend themselves to practical applications of “creation care.” As one

example, two biology courses at Andrews University (Ornithology and Mammalogy) are designated as “Service Learning” courses that require students to implement a course-related service project. These projects give students opportunity to directly care for and/or teach others (usually grade school students or Pathfinders) to value God’s creation.

I am not advocating a watered down, “spiritualized” version of science teaching. Science education in a Christian school must be every bit as rigorous as in a secular setting, expecting students to master the important technical aspects of modern scientific knowledge. But it must do more, situating this knowledge—firmly—within a Christian framework that illuminates the real value and meaning of all of nature.

### Our Product?

Healing the rift between humanity and nature requires that we help our students appreciate the genuine value of creation. This article has suggested three principles for doing so. First, encourage more, direct, meaningful contact with the natural world, allowing students to discover the marvels of creation and genuinely experience *biophilia*. Second, work to improve science education, especially at the high school and college levels, so that students clearly grasp the interconnectedness and human relevance of natural systems. Third, help shape biblically informed, ethical people who understand—and practice in their daily lives—the inherent, God-given meaning and value of nature. Because this value is astonishingly high (God called His creatures good, and deemed the whole creation “very good”), students who have gained this perspective will appreciate, and seek out, deliberate contact with nature and will seek to serve as good stewards of creation, effectively carrying out the first calling given to Adam and Eve in the garden. They will function as “repairers of the breach” between humanity and the rest of God’s good creation. ✍



**H. Thomas Goodwin** is a Professor of Paleobiology at Andrews University in Berrien Springs, Michigan, where he teaches courses in biology, paleontology, and geology.

### NOTES AND REFERENCES

1. Fred Van Dyke, David C. Mahan, Joseph K. Sheldon, and Raymond H. Brand, *Redeeming Creation: The Biblical Basis for Environmental Stewardship* (Downers Grove, Ill.: InterVarsity Press, 1996), pp. 97, 98.
2. Edward O. Wilson, *The Creation: An Appeal to Save Life on Earth* (New York: W. W. Norton), p. 63.
3. J. Matthew Sleeth, *Serve God, Save the Planet: A Christian Call to Action* (White River Junction, Vt.: Chelsea Green), p. 47.
4. These ideas are developed by Wilson in *The Creation*, op cit., pp. 139-147.
5. *Ibid.*, p. 130.
6. *Ibid.*, pp. 131-138. The principles are Wilson’s, but the specific examples (especially those given in an explicitly Christian context) are my own. Wilson, as a self-described secular humanist, would obviously choose other examples.
7. *Ibid.*, p. 12 (italics supplied).
8. Van Dyke et al., *Redeeming Creation*, op cit., p. 46.
9. *Ibid.*, p. 49.
10. *Ibid.*, p. 38.
11. *Ibid.*, p. 39.