

# EDITORIAL

## RIVERS OUT OF EDEN

*Richard Dawkins recently wrote a book entitled *River Out of Eden: A Darwinian View of Life*,<sup>1</sup> in which he compared the river of Eden with the flow of digital information in DNA. From the point of the origin of life, this information has flowed from ancestor to descendant. Like Eden's river, the flow has divided repeatedly, forming today's biodiversity. I found Dawkins' metaphor interesting, although probably not in the way he intended.*

*One of the criticisms of the Genesis creation account has been the way the river is described. According to Genesis 2:10, a river flowed out of Eden and divided to produce four smaller rivers. Ordinary rivers don't do that. Instead, tributaries flow together to form larger rivers. Thus, something is wrong with the description of a river that divides as it flows.*

*But what about canal systems? Canal systems do indeed divide to provide water to different points along the route. Evidently, the "river" out of Eden was more like a canal than a river. And canals are designed. That is the point I found particularly interesting about Dawkins' book title. As Eden's river was the result of design, so the digital information in DNA has the characteristics of design. The design evident in living organisms has not escaped Dawkins' notice. He states: "The illusion of purpose is so powerful that biologists themselves use the assumption of good design as a working tool" (p 98). The Darwinian philosopher Michael Ruse has also noted the usefulness of the concepts of design and purpose in biology: "Organisms, unlike planets and particles, really do look as if they were designed."<sup>2</sup> Not being predisposed to reject the idea of design, I will simply accept the obvious and return to the river metaphor.*

*If one views the fossil record as Dawkins does — as a process of branching over hundreds of millions of years —, one finds an anomaly with respect to the metaphor of a branching river. When we first view the "river" in the Cambrian sediments and uppermost Precambrian, we find not one "river," but many separate "rivers."<sup>3</sup> A large proportion of Phyla and Classes are found in Cambrian*

*sediments, or are inferred to have been present.<sup>4</sup> The well-known “top-down” pattern of the fossil sequence suggests, not one river, but many rivers with separate sources. Even at lower taxonomic levels the systematic pattern of morphological gaps among the fossils suggests that additional independent lineages abruptly appear throughout the fossil record.*

*Creationist theory offers an interesting hypothesis to explain the observed pattern of the discontinuity of life. Many lineages were created separately. This does not deny descent with modification, but it does recognize that modification requires a preexisting starting point. The origins of “morphological novelties” remain unexplained except as a result of separately created starting points.*

*In creationist terminology, the term baramin is used to refer to a separately created pair or group.<sup>5</sup> From each separately created baramin, a “river” of information for life, contained in the DNA, has flowed to its descendants. Each baramin can be considered a separate river. Since life consists of many separate lineages, we can describe them, as in our title, as many “rivers out of Eden.”*

*L. James Gibson*

## **ENDNOTES**

1. Dawkins R. 1995. River out of Eden: a Darwinian view of life. NY: Basic Books.
2. Ruse M. 1989. Teleology in biology: is it a cause for concern? Trends in Ecology and Evolution 4:51-54.
3. DeHaan RF. 1998. Do phyletic lineages evolve from the bottom up or develop from the top down? Perspectives on Science and Christian Faith 50:260-271.
4. E.g., see: (a) Valentine JW. 1995. Why no new phyla after the Cambrian? Genome and ecospace hypotheses revisited. Palaios 10:190-194; (b) Wray GA, Levinton JS, Shapiro LH. 1996. Molecular evidence for deep Precambrian divergence among metazoan phyla. Science 274:568-573.
5. The term was first introduced by Frank L. Marsh in 1941 (Fundamental biology. Lincoln, NE: self-published, p 100). For a recent discussion of the term, see: ReMine WJ. 1993. The biotic message. St Paul MN: St Paul Science, p 443-453.