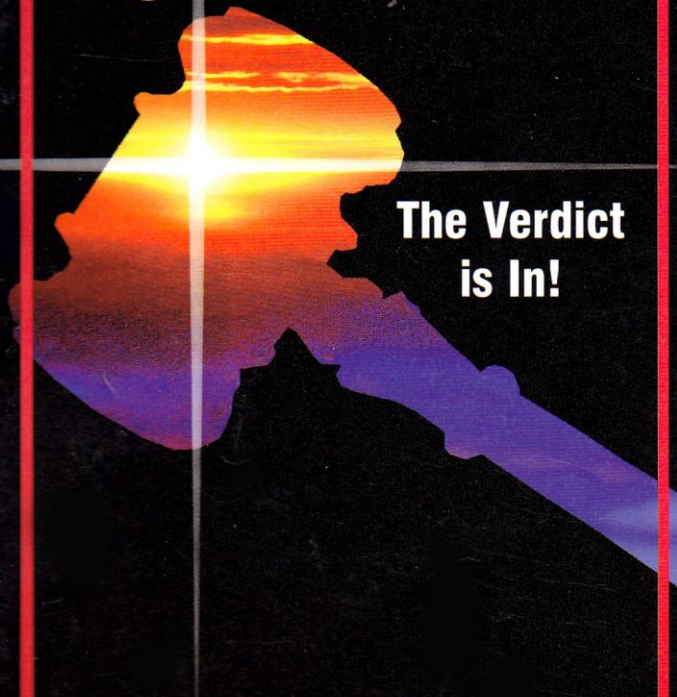


The Scientific Case Against Evolution



**The Verdict
is In!**

Henry M. Morris, Ph.D.



The Scientific Case Against Evolution

by Henry M. Morris

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The Scientific Case Against Evolution

Belief in evolution is a remarkable phenomenon. It is a belief passionately defended by the scientific establishment, despite the lack of any observable scientific evidence for macroevolution (that is, evolution from one distinct kind of organism into another). This odd situation is briefly documented here by citing recent statements from leading evolutionists admitting their lack of proof. These statements inadvertently show that evolution on any significant scale does not occur at present, and never happened in the past, and could never happen at all.

Evolution Is Not Happening Now

First of all, the lack of a case for evolution is clear from the fact that no one has ever seen it happen. If it were a real process, evolution should still be occurring, and there should be many “transitional” forms that we could observe. What we see instead, of course, is an array of distinct “kinds” of plants and animals with many varieties *within* each kind, but with very clear and—apparently—unbridgeable gaps between the kinds. That is, for example, there are many varieties of dogs and many

varieties of cats, but no “dats” or “cogs.” Such variation is often called microevolution, and these minor horizontal (or downward) changes occur fairly often, but such changes are not true “vertical” evolution.



Evolutionary geneticists have often experimented on fruit flies and other rapidly reproducing species to induce mutational changes hoping they would lead to new and better species, but these have all failed to accomplish their goal. No truly new species has ever been produced, let alone a new “basic kind.”

A current leading evolutionist, Jeffrey Schwartz, professor of anthropology at the University of Pittsburgh, has recently acknowledged that:

. . . it was and still is the case that, with the exception of Dobzhansky’s claim about a new species of fruit fly, the formation of a new species, by any mechanism, has never been observed.’

The scientific method traditionally has required experimental observation and replication. The fact that macroevolution (as distinct from microevolution) has never been observed would seem to exclude it from the domain of true science. Even Ernst Mayr, the dean of living evolutionists, longtime professor of biology at Harvard, who has alleged that evolution is a “simple fact,” nevertheless agrees that it is an “historical science”

for which “laws and experiments are inappropriate techniques”² by which to explain it. One can never actually *see* evolution in action.

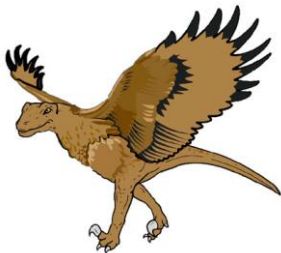
Evolution Never Happened in the Past

Evolutionists commonly answer the above criticism by claiming that evolution goes too slowly for us to see it happening today. They used to claim that the real evidence for evolution was in the fossil record of the past, but the fact is that the billions of known fossils do not include a single unequivocal transitional form with transitional structures in the process of evolving.

Given that evolution, according to Darwin, was in a continual state of motion . . . it followed logically that the fossil record should be rife with examples of transitional forms leading from the less to the more evolved.³

Even those who believe in rapid evolution recognize that a considerable number of generations would be required for one distinct “kind” to evolve into another more complex kind. There ought, therefore, to be a considerable number of true transitional structures preserved in the fossils—after all, there are billions of *non-transitional* structures there! But (with the exception of a few very doubtful creatures such as the controversial feathered dinosaurs and the alleged walking whales), they are *not* there.

Instead of filling in the gaps in the fossil record with so-called missing links, most paleontologists found themselves facing a situation in which there were only gaps in the fossil record, with no evidence of transformational intermediates between documented fossil species.⁴



The entire history of evolution from the evolution of life from non-life to the evolution of vertebrates from invertebrates to the evolution of man from the ape is strikingly devoid of intermediates: the links are all missing in the fossil record, just as they are in the present world.

With respect to the origin of life, a leading researcher in this field, Leslie Orgel, after noting that neither proteins nor nucleic acids could have arisen without the other, concludes:

And so, at first glance, one might have to conclude that life could never, in fact, have originated by chemical means.⁵

Being committed to total evolution as he is, Dr. Orgel cannot accept any such conclusion as that. Therefore, he speculates that RNA may have come first, but then he still has to admit that:

The precise events giving rise to the RNA world remain unclear. . . . investigators have proposed

many hypotheses, but evidence in favor of each of them is fragmentary at best.⁶

Translation: “There is no known way by which life could have arisen naturalistically.” Unfortunately, two generations of students have been taught that Stanley Miller’s famous experiment on a gaseous mixture, practically proved the naturalistic origin of life. But not so!

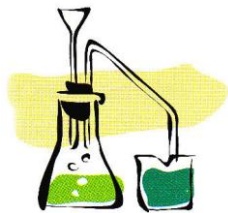
Miller put the whole thing in a ball, gave it an electric charge, and waited. He found that amino acids and other fundamental complex molecules were accumulating at the bottom of the apparatus. His discovery gave a huge boost to the scientific investigation of the origin of life. Indeed, for some time it seemed like creation of life in a test tube was within reach of experimental science.

Unfortunately, such experiments have not progressed much further than the original prototype, leaving us with a sour aftertaste from the primordial soup.⁷

Neither is there any clue as to how the one-celled organisms of the primordial world could have evolved into the vast array of complex multi-celled invertebrates of the Cambrian period. Even dogmatic evolutionist Gould admits that:

The Cambrian explosion was the most remarkable and puzzling event in the history of life.⁸

Equally puzzling, however, is how some invertebrate creature in the ancient ocean, with all its “hard parts” on the outside, managed to evolve into the first vertebrate—that is,



the first fish—with its hard parts all on the inside.

Yet the transition from spineless invertebrates to the first backboned fishes is still shrouded in mystery, and many theories abound.⁹

Other gaps are abundant, with no real transitional series anywhere. A very bitter opponent of creation science, paleontologist, Niles Eldredge, has acknowledged that there is little, if any, evidence of evolutionary transitions in the fossil record. Instead, things remain the same!

It is a simple ineluctable truth that virtually all members of a biota remain basically stable, with minor fluctuations, throughout their durations. . . .¹⁰

So how do evolutionists arrive at their evolutionary trees from fossils of organisms which didn't change during their durations?

Fossil discoveries can muddle over attempts to construct simple evolutionary trees—fossils from key periods are often not intermediates, but rather hodge podges of defining features of many different groups. . . . Generally, it seems that major groups are not assembled in a simple linear or progressive manner—new features are often “cut and pasted” on different groups at different times.¹¹

As far as ape/human intermediates are concerned, the same is true, although anthropologists have been eagerly searching for them for many years. Many have been

proposed, but each has been rejected in turn.

All that paleoanthropologists have to show for more than 100 years of digging are remains from fewer than 2000 of our ancestors. They have used this assortment of jawbones, teeth and fossilized scraps, together with molecular evidence from living species, to piece together a line of human descent going back 5 to 8 million years to the time when humans and chimpanzees diverged from a common ancestor.¹²



Anthropologists supplemented their extremely fragmentary fossil evidence with DNA and other types of molecular genetic evidence from living animals to try to work out an evolutionary scenario that will fit. But this genetic evidence really doesn't help much either, for it contradicts fossil evidence. Lewin notes that:

The overall effect is that molecular phylogenetics is by no means as straightforward as its pioneers believed. . . . The Byzantine dynamics of genome change has many other consequences for molecular phylogenetics, including the fact that different genes tell different stories.¹³

Summarizing the genetic data from humans, another author concludes, rather pessimistically:

Even with DNA sequence data, we have no direct access to the processes of evolution, so objective

reconstruction of the vanished past can be achieved only by creative imagination.¹⁴

Since there is no real scientific evidence that evolution is occurring at present or ever occurred in the past, it is reasonable to conclude that evolution is not a fact of science, as many claim. In fact, it is not even science at all, but an arbitrary system built upon faith in universal naturalism.

Actually, these negative evidences against evolution are, at the same time, strong positive evidences for special creation. They are; in fact, specific predictions based on the creation model of origins.

Creationists would obviously predict ubiquitous gaps between created kinds, though with many varieties capable of arising within each kind, in order to enable each basic kind to cope with changing environments without becoming extinct. Creationists also would anticipate that any “vertical changes” in organized complexity would be downward, since the Creator (by definition) would create things correctly to begin with. Thus, arguments and evidences against evolution are, at the same time, positive evidences for creation.

The Equivocal Evidence from Genetics

Nevertheless, because of the lack of any direct evidence for evolution, evolutionists are increasingly turning to dubious circumstantial evidences, such as similarities in DNA or other biochemical components of

organisms as their “proof” that evolution is a scientific fact. A number of evolutionists have even argued that DNA itself is evidence for evolution since it is common to all organisms. More often is the argument used that similar DNA structures in two different organisms proves common evolutionary ancestry.

Neither argument is valid. There is no reason whatever why the Creator could not or would not use the same type of genetic code based on DNA for all His created life forms. This is evidence for intelligent design and creation, not evolution.

The most frequently cited example of DNA commonality is the human/chimpanzee “similarity,” noting that chimpanzees have more than 90% of their DNA the same as humans. This is hardly surprising, however, considering the many physiological resemblances between people and chimpanzees. Why shouldn’t they have similar DNA structures in comparison, say, to the DNA differences between men and spiders?

Similarities—whether of DNA, anatomy, embryonic development, or anything else—are better explained in terms of creation by a common Designer than by evolutionary relationship. The great differences between organisms are of greater significance than the similarities, and evolutionism has no explanation for these if they all are



assumed to have had the same ancestor. How could these great gaps between kinds ever arise at all, by any natural process?

The apparently small differences between human and chimpanzee DNA obviously produce very great differences in their respective anatomies, intelligence, etc. The superficial similarities between all apes and human beings are nothing compared to the differences in any practical or observable sense.

Nevertheless, evolutionists, having largely become disenchanted with the fossil record as a witness for evolution because of the ubiquitous gaps where there should be transitions, recently have been promoting DNA and other genetic evidence as proof of evolution. However, as noted above by Roger Lewin, this is often inconsistent with, not only the fossil record, but also with the comparative morphology of the creatures. Lewin also mentions just a few typical contradictions yielded by this type of evidence in relation to more traditional Darwinian “proofs.”

The elephant shrew, consigned by traditional analysis to the order insectivores . . . is in fact more closely related to . . . the true elephant. Cows are more closely related to dolphins than they are to horses. The duck-billed platypus . . . is on equal evolutionary footing with . . . kangaroos and koalas.¹⁵

There are many even more bizarre comparisons yielded by this approach.

The abundance of so-called “junk DNA” in the genetic code also has been offered as a special type of evidence for evolution, especially those genes which they think have experienced mutations, sometimes called “pseudogenes.”“ However, evidence is accumulating rapidly today that these supposedly useless genes do actually perform useful functions.

Enough genes have already been uncovered in the genetic midden to show that what was once thought to be waste is definitely being transmitted into scientific code.¹⁷

It is thus wrong to decide that junk DNA, even the so-called “pseudogenes,” have no function. That is merely an admission of ignorance and an object for fruitful research. Like the so-called “vestigial organs” in man, once considered as evidence of evolution but now all known to have specific uses, so the junk DNA and pseudogenes most probably are specifically useful to the organism, whether or not those uses have yet been discovered by scientists.

At the very best this type of evidence is strictly circumstantial and can be explained just as well in terms of primeval creation supplemented in some cases by later deterioration, just as expected in the creation model.

The real issue is, as noted before, whether there is any observable evidence that evolution is occurring now or has ever occurred in the past. As we have seen, even evolutionists have to acknowledge that this type of

real scientific evidence for evolution does not exist.

A good question to ask is: *Why* are all *observable* evolutionary changes either horizontal and trivial (so-called microevolution) or downward toward deterioration and extinction? The answer seems to be found in the universally applicable laws of the science of thermodynamics.

Evolution Could Never Happen at All

The main scientific reason why there is no evidence for evolution in either the present or the past (except in the creative imagination of evolutionary scientists) is because one of the most fundamental laws of nature precludes it. The law of increasing entropy—also known as the second law of thermodynamics—stipulates that all systems in the real world tend to go “downhill,” as it were, toward disorganization and decreased complexity.

This law of entropy is, by any measure, one of the most universal, best-proved laws of nature. It applies not only in physical and chemical systems, but also in biological and geological systems—in fact, in *all* systems, without exception.

No exception to the second law of thermodynamics has ever been found—not even a tiny one. Like conservation of energy (the “first law”), the existence of a law so precise and so independent of details of models must have a logical foundation that is independent of the

fact that matter is composed of interacting particles.”

The author of this quote is referring primarily to physics, but he does point out that the second law is “independent of details of models.” Besides, practically all evolutionary biologists are reductionists—that is, they insist that there are no “vitalist” forces in living systems, and that *all* biological processes are explicable in terms of physics and chemistry. That being the case, biological processes also must operate in accordance with the laws of thermodynamics, and practically all biologists acknowledge this.

Evolutionists commonly insist, however, that evolution is a fact anyhow, and that the conflict is resolved by noting that the earth is an “open system,” with the incoming energy from the sun able to sustain evolution throughout the geological ages in spite of the natural tendency of all systems to deteriorate toward disorganization. That is how an evolutionary entomologist has dismissed W. A. Dembski’s impressive recent book, *Intelligent Design*. This scientist defends what he thinks is “natural processes’ ability to increase complexity” by noting what he calls a “flaw” in “the arguments against evolution based on the second law of thermodynamics.” And what is this flaw?

Although the overall amount of disorder in a closed system cannot decrease, local order within a larger system can increase even without the actions of an intelligent agent.¹⁹

This naive response to the entropy law is typical of evolutionary dissimulation. While it is true that local order can increase in an open system if certain conditions are met, the fact is that evolution does not meet those conditions. Simply saying that the earth is open to the energy from the sun says nothing about *how* that raw solar heat is converted into increased complexity in any system, open or closed.

The fact is that the best known and most fundamental equation of thermodynamics says that the influx of heat into an *open* system will *increase* the entropy of that system, not decrease it. All known cases of decreased entropy (or increased organization) in open systems involve a guiding program of some sort and one or more energy conversion mechanisms.

Evolution has neither of these. Mutations are not “organizing” mechanisms, but disorganizing (in accord with the second law). They are commonly harmful, sometimes neutral, but never beneficial (at least as far as observed mutations are concerned). Natural selection cannot generate order, but can only “sieve out” the disorganizing mutations presented to it, thereby conserving the existing order, but never generating new order. In principle, it may be barely conceivable that evolution could occur in open systems, in spite of the *tendency* of all systems to disintegrate sooner or later. But no one yet has been able to show that it actually *has* the ability to overcome this universal tendency, and that is the basic

reason why there is still no *bona fide* proof of evolution, past or present.

From the statements of evolutionists themselves, therefore, we have learned that there is no real *scientific evidence* for real evolution. The only observable evidence is that of very limited horizontal (or downward) changes within strict limits.

Evolution is Religion—Not Science

In no way does the idea of particles-to-people evolution meet the long-accepted criteria of a scientific theory. There are no such evolutionary transitions that have ever been observed in the fossil record of the past; and the universal law of entropy seems to make it impossible on any significant scale.

Evolutionists claim that evolution is a scientific fact, but they almost always lose scientific debates with creationist scientists. Accordingly, most evolutionists now decline opportunities for scientific debates, preferring instead to make unilateral attacks on creationists.

Scientists should refuse formal debates because they do more harm than good, but scientists still need to counter the creationist message.²⁰

The question is, just *why* do they need to counter the creationist message? Why are they so adamantly committed to anti-creationism?



The fact is that evolutionists believe in evolution **because** they *want* to. It is their desire at all costs to explain the origin of everything without a Creator. Evolutionism is thus intrinsically an atheistic religion. Some may prefer to call it humanism, and “new age” evolutionists place it in the context of some form of pantheism, but they all amount to the same thing. Whether atheism or humanism (or even pantheism), the purpose is to eliminate a personal God from any active role in the origin of the universe and all its components, including man.

The core of the humanistic philosophy is naturalism—the proposition that the natural world proceeds according to its own internal dynamics, without divine or supernatural control or guidance, and that we human beings are creations of that process. It is instructive to recall that the philosophers of the early humanistic movement debated as to which term more adequately described their position: humanism or naturalism. The two concepts are complementary and inseparable.²¹

Since both naturalism and humanism exclude God from science or any other active function in the creation or maintenance of life and the universe in general, it is very obvious that their position is nothing but atheism. And atheism, no less than theism, is a religion! Even doctrinaire-atheistic evolutionist Richard Dawkins admits that atheism cannot be proved to be true.

Of course we can't prove that there isn't a God.²² Therefore, they must *believe* it, and that makes it a religion.

The atheistic nature of evolution is not only admitted, but insisted upon by most of the leaders of evolutionary thought. Ernst Mayr, for example, says that:

Darwinism rejects all supernatural phenomena and causations.²³

A professor in the Department of Biology at Kansas State University says:

Even if all the data point to an intelligent designer, such a hypothesis is excluded from science because it is not naturalistic.²⁴

It is well known by almost everyone in the scientific world today that such influential evolutionists as Stephen Jay Gould and Edward Wilson of Harvard, Richard Dawkins of England, William Provine of Cornell, and numerous other evolutionary spokesmen are dogmatic atheists. Eminent scientific philosopher and ardent Darwinian atheist Michael Ruse has even acknowledged that evolution *is* their *religion!*

Evolution is promoted by its practitioners as more than mere science. Evolution is promulgated as an ideology, a secular religion—a full-fledged alternative to Christianity, with meaning and morality . . . Evolution is a religion. This was true of evolution in the beginning, and it is true of evolution still today.²⁵

Another way of saying “religion” is “worldview,” the whole of reality. The evolutionary worldview applies not only to the evolution of life, but even to that of the entire universe. In the realm of cosmic evolution, our naturalistic scientists depart even further from experimental science than life scientists do, manufacturing a variety of evolutionary cosmologies from esoteric mathematics and metaphysical speculation. Socialist Jeremy Rifkin has commented on this remarkable game.

Cosmologies are made up of small snippets of physical reality that have been remodeled by society into vast cosmic deceptions.²⁶

They *must* believe in evolution, therefore, in spite of all the evidence, not because of it. And speaking of deceptions, note the following remarkable statement. We take the side of science in spite of the patent absurdity of some of its constructs. . . . in spite of the tolerance of the scientific community for unsubstantiated commitment to materialism. . . .we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and set of concepts that produce material explanations, no matter how counterintuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door.²⁷

The author of this frank statement is Richard Lewontin of Harvard. Since evolution is not a laboratory

science, there is no way to test its validity, so all sorts of just-so stories are contrived to adorn the textbooks. But that doesn't make them true! An evolutionist reviewing a recent book by another (but more critical) evolutionist, says:

We cannot identify ancestors or “missing links,” and we cannot devise testable theories to explain how particular episodes of evolution came about.



Gee is adamant that all the popular stories about how the first amphibians conquered the dry land, how the birds developed wings and feathers for flying, how the dinosaurs went extinct, and how humans evolved from apes are just products of our imagination, driven by prejudices and preconceptions.²⁸

A fascinatingly honest admission by a physicist indicates the passionate commitment of establishment scientists to naturalism. Speaking of the trust students naturally place in their highly educated college professors, he says:

And I use that trust to effectively brainwash them. . . . our teaching methods are primarily those of propaganda. We appeal—without demonstration—to evidence that supports our position. We only introduce arguments and evidence that supports the

currently accepted theories and omit or gloss over any evidence to the contrary.²⁹

Creationist students in scientific courses taught by evolutionist professors can testify to the frustrating reality of that statement. Evolution is, indeed, the pseudo-scientific basis of religious atheism, as Ruse pointed out. Will Provine at Cornell University is another scientist who frankly acknowledges this.

As the creationists claim, belief in modern evolution makes atheists of people. One can have a religious view that is compatible with evolution only if the religious view is indistinguishable from atheism.³⁰

Once again, we emphasize that evolution is *not* science, evolutionists' tirades notwithstanding. It is a philosophical worldview, nothing more.

(Evolution) must, they feel, explain everything. . . . A theory that explains everything might just as well be discarded since it has no real explanatory value. Of course, the other thing about evolution is that anything can be said because very little can be disproved. Experimental evidence is minimal.³¹

Even *that* statement is too generous. Actual experimental evidence demonstrating true evolution (that is, macroevolution) is not "minimal." It is nonexistent!

The concept of evolution as a form of religion is not new. In my book, *The Long War Against God*, I

documented the fact that some form of evolution has been the pseudo-rationale behind every anti-creationist religion since the very beginning of history. This includes all the ancient ethnic religions, as well as such modern world religions as Buddhism, Hinduism, and others, as well as the “liberal” movements in even the creationist religions (Christianity, Judaism, Islam).

As far as the twentieth century is concerned, the leading evolutionist is generally considered to be Sir Julian Huxley, primary architect of modern neo-Darwinism. Huxley called evolution a “religion without revelation” and wrote a book with that title (2nd edition, 1957). In a later book, he said:

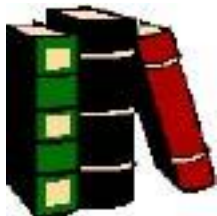
Evolution . . . is the most powerful and the most comprehensive idea that has ever arisen on earth.³³

Later in the book he argued passionately that we must change “our pattern of religious thought from a God-centered to an evolution-centered pattern.”³⁴ Then he went on to say that: “The God hypothesis . . . is becoming an intellectual and moral burden on our thought.” Therefore, he concluded that “we must construct something to take its place.”³⁵

That something, of course, is the religion of evolutionary humanism, and that is what the leaders of evolutionary humanism are trying to do today.

In closing this survey of the scientific case against evolution (and, therefore, for creation), the reader is

reminded again that all quotations in the article are from doctrinaire evolutionists. No Bible references are included, and no statements by creationists. The evolutionists themselves, to all intents and purposes, have shown that evolutionism is not science, but religious faith in atheism.



References

1. Jeffrey H. Schwartz, *Sudden Origins* (New York, John Wiley, 1999), p. 300.
2. Ernst Mayr, "Darwin's Influence on Modern Thought," *Scientific American* (vol. 283, July 2000), p. 83.
3. Jeffrey H. Schwartz, op. cit., p.89.
4. Ibid.
5. Leslie E. Orgel, "The Origin of Life on the Earth," *Scientific American* (vol. 271, October 1994), p. 78.
6. Ibid., p. 83.
7. Massimo Pigliucci, "Where Do We Come From?" *Skeptical Inquirer* (vol. 23, September/October 1999), p. 24.
8. Stephen Jay Gould, "The Evolution of Life," chapter 1 in *Evolution: Facts and Fallacies*, ed. by J. William Schopf (San Diego, CA., Academic Press, 1999), p. 9.
9. J. O. Long, *The Rise of Fishes* (Baltimore: John Hopkins University Press, 1995), p. 30.
10. Niles Eldredge, *The Pattern of Evolution* (New York: W. H. Freeman and Co., 1998), p. 157.
11. Neil Shubin, "Evolutionary Cut and Paste," *Nature* (vol. 349, July 2, 1998), p.12.
12. Colin Tudge, "Human Origins Revisited," *New Scientist* (vol. 146, May 20, 1995), p. 24.
13. Roger Lewin, "Family Feud," *New Scientist* (vol. 157, January 24, 1998), p. 39.
14. N. A. Takahata, "Genetic Perspective on the Origin and History of Humans," *Annual Review of Ecology and Systematics* (vol. 26, 1995), p. 343.
15. Lewin, op. cit., p. 36.
16. Rachel Nowak, "Mining Treasures from 'Junk DNA'," *Science* (vol. 263, February 4, 1994), p. 608.
17. Ibid.
18. E. H. Lieb and Jakob Yngvason, "A Fresh Look at Entropy and the Second Law of Thermodynamics," *Physics Today* (vol. 53, April 2000), p. 32.
19. Norman A. Johnson, "Design Flaw," *American Scientist* (vol. 88, May/June 2000), p. 274.
20. Scott, Eugenie, "Fighting Talk," *New Scientist* (vol. 166, April 22, 2000), p.47. Dr. Scott is director of the anti-creationist organization

- euphemistically named, The National Center for Science Education.
21. Ericson, Edward L., "Reclaiming the Higher Ground," *The Humanist* (vol. 60, September/October 2000), p. 30.
 22. Dawkins, Richard, replying to a critique of his faith in the liberal journal, *Science and Christian Belief* (vol. 7, 1994), p. 47.
 23. Mayr, Ernst, "Darwin's Influence on Modern Thought," *Scientific American* (vol. 283, July 2000), p. 83.
 24. Todd, Scott C., "A View from Kansas on the Evolution Debates," *Nature* (vol. 401, September 30, 1999), p. 423.
 25. Ruse, Michael, "Saving Darwinism from the Darwinians," *National Post* (May 13, 2000), p. B-3.
 26. Rifkin, Jeremy, "Reinventing Nature," *The Humanist* (vol. 58, March/April 1998), p. 24.
 27. Lewontin, Richard, *Review of the Demon-Haunted World*, by Carl Sagan. In *New York Review of Books*, January 9, 1997.
 28. Bowler, Peter J., Review *In Search of Deep Time* by Henry Gee (Free Press, 1999), *American Scientist* (vol. 88, March/April 2000), p. 169.
 29. Singham, Mark, "Teaching and Propaganda," *Physics Today* (vol. 53, June 2000), p. 54.
 30. Provine, Will, "No Free Will," in *Catching Up with the Vision*, ed. by Margaret W. Rossiter (Chicago: University of Chicago Press, 1999), p. S123.
 31. Appleyard, Bryan, "You Asked for It," *New Scientist* (vol. 166, April 22, 2000), p. 45.
 32. Henry M. Morris, *The Long War Against God* (Grand Rapids, Michigan: Baker Book House, 1989), 344 pp.
 33. Julian Huxley, *Essays of a Humanist* (New York: Harper and Row, 1964), p. 125.
 34. *Ibid.*, p. 222.
 35. *Ibid.*



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