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NBC's Mysterious Extinction of Facts

John Cole

Even before NBC's broadcast of *Mysterious Origins of Man*, I suspected and predicted from the preview information that this show was going to hew to the line of the Hare Krishna book, *Forbidden Archaeology* (Ed: Reviewed by Wade Tarzia in *Creation/Evolution* 34:13-15) more than to the Institute for Creation Research (ICR) line. It turns out that this suspicion was more than right!! Much of the program was devoted to the conspiratorial views of authors Cremo and Thompson that archeologists were conspiring to "censor" important "anomalous" evidence that would support their claims. Furthermore, Michael Shermer told the Skeptics list (reprinted with permission) that the authors "think that they've got the idea that will cause the paradigm shift in science. They do not seem to understand that anomalies are a part of 'normal' science in all fields and that pointing them out amounts to nothing. . . . A new paradigm . . . not only explains the anomalies, but also all the data, and do[es] it better than the old paradigm."

The recycling of the Texas footprint "finds" fits into their

"anomalism" claims, although Carl Baugh's claims that these represent contemporaneous human and dinosaur tracks are rejected by "mainstream" creationists at ICR (See sidebar comments on the Texas footprints by ICR's John Morris). Furthermore, the Glen Rose segment was indescribably spacy and completely ignored the definitive debunking work by Hastings, Kuban, Godfrey, Schafersman, Cole, and others of the footprint ("mantrax") claims. In the past, these "tracks" have been debunked so thoroughly that most *creationist* organizations do not take them seriously any more; so one wonders, why on earth does NBC?! The most egregious example was the highlighting of the "Burdick footprint" (complete with an alleged anatomist explaining why it is so convincing). Quite apart from tracks or marks in limestone beds, this is one of the most well-exposed frauds in the entire "mantrax" fiasco. Does NBC have NO fact-checker??!

Physical anthropologist Laurie Godfrey demonstrated more than a decade ago why this was a fake and an extremely poor fake, at that! *Creation/Evolution* #15 was entirely devoted to the Texas claims, and in *Natural History*, Aug 1985 Laurie and I outline the case against this and other related claims. Furthermore, Glen Kuban, Ronnie Hastings, I, and others have published similar exposes all over the map—including in creationist publications! Some of this is summarized in the Talk.Origins FAQ Archives, and Glen Kuban has just completed a new WWW homepage that deals in part with this subject. Finally, as an archaeologist lured into this argument long ago, I'd also note that the majority of the segments concentrating on alleged archaeology were no better.

In a similar vein, every claim in the program can be easily, though laboriously, refuted. For

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There is nothing like a political campaign mixed with a healthy dose of popular culture to change the face of *NCSE Reports* at the last minute.

It gave us a real feel of "stop the presses" here in the editorial office and made us rewrite much of what would go into this issue. In a cosmic confluence of politics and entertainment, both the Buchanan presidential campaign and NBC television have kept NCSE and its supporters around the country very busy.

Perhaps of greatest concern to NCSE are Buchanan's pronouncements on creationism. In *NCSE Reports* 15(3) we reported Buchanan's statement indicating that he equated creationism with "Truth." In an interview in December's *GQ*, he told writer John Judis that he doesn't know much about modern biology—in particular, evolution—because in high school he never had a course in biology (see p. 3). We wonder, is Buchanan developing a brand of populism recycled from the 19th Century "Know-Nothing" party line?

NBC television also did some recycling in a one-hour special, "The Mysterious Origins of Man," broadcast on Sunday, February 25, 1995. The program provided a forum for a wide variety of speculations about the origins and history of humans (and other living things) on the earth (see cover article). While most of these ideas have been extensively discredited in a variety of fora, NBC went ahead to tell us that "scientists" have found evidence of the city of Atlantis under Antarctic ice, human and dinosaur footprints occurring side by side, or evidence of extraterrestrial influences in human evolution and material culture. Not only have scientists debunked many of these ideas repeatedly, but even the Institute for Creation Research's John Morris has backed away from one of their old standards—the dinosaur and human footprints in the river bed in Paluxy, Texas (see p. 7). Why, asks the NBC special, has the scientific community suppressed these ideas? NCSE members and supporters know the answer to this question. Apparently the

research office at NBC missed out on the benefits of NCSE membership! In this issue, we have provided space for teachers to tell us what has happened in their classes in the wake of the NBC special (see p. 22). Look for a detailed article on the aftermath of the NBC special in the next issue of *NCSE Reports*.

Our readers know that the Tennessee legislature has just dropped a bill to require that teachers tell their students that evolution is "only a theory" (see p. 6) and that similar inroads have been made administratively in Georgia (p. 8) and Alabama (p. 10). Here in Wisconsin, Laura visited a middle-school classroom where the teacher painstakingly described evolution using the phrase "only a theory" repeatedly and emphatically. The teacher did not, however, use this phrase about any other aspects of biology. When Laura discussed this with her, the teacher said that this was a difficult and controversial issue and that she was trying not to let her bias show. When asked, the teacher said that she was a creationist, and Laura assured her that this bias was evident. As philosopher of science Elliott Sober has argued, special creationism was a scientific theory—one that scientists rejected because it repeatedly failed to account for the our observations on the history, variation, adaptation to changing conditions, and extinction of life on earth.

Many of you have expressed concern about the delay in publications scheduled for the last half of 1995. We apologize for the production delays that have been caused by moving the editing and printing operations to Madison, but we are happy to report that we are in what my students call the "Heinz" mode—a rapid "catch-up" phase. Even before this issue is gone to press we are beginning production on the Spring, 1996 issue. So please, keep in touch with NCSE about important issues and events in your own area and let *NCSE Reports* tell the rest of our members all about it.

—Anj Petto and Laura McMahon

Pat Buchanan Takes on Darwin

"You may believe you're descended from monkeys; I don't believe it. . . . I think you're a creature of God." Delivered with the fervor and passion of an evangelical preacher, these are the words of presidential candidate Pat Buchanan. Although March saw his chances of winning the Republican nomination fading, it is clear that Buchanan is a voice that resonates with the passions, fears, hopes and dreams of a significant number of U.S. citizens. Among these concerns is his outspoken opposition to evolution and his mistaken notion that his church (Roman Catholic) demands the same.

Throughout the campaign, Buchanan has made clear his opposition to evolutionary biology in education and in practice. On the ABC-TV program *This Week With David Brinkley* broadcast on Sunday, February 18, Buchanan said, "I believe that children should not be forced to believe the Bible, but I think that every child should know what is in the Old and the New Testament. . . . I believe that God created heaven and earth. I believe, first, I believe the literal New Testament is literally the word of God, and I believe the Old Testament is the inspired word of God. . . . I think they have a right to insist that Godless evolution not be taught to their children or their children not be indoctrinated in it."

In an interview published in *GQ* (65 [Dec. 1995], 230-237, 250-252), Buchanan told interviewer John Judis, "Look, my view is, I believe that God created Heaven and earth. . . . I think this: What ought to be taught as fact is what is

known as fact. I don't believe it is demonstrably true that we have descended from apes. I don't believe it. I do not believe all that. . . . I didn't study it in high school because we studied Greek and Latin. . . . We didn't have biology and chemistry" (ibid. 237). Perhaps one cannot expect someone who has never studied science to understand it, however, it is clearly the case that science does regard it as a fact that we are descended from an ancestral ape lineage and that humans can be considered apes in the same way that our ancestors' descent from an older mammalian lineage qualifies us as mammals.

Buchanan might also be surprised, but probably not terribly interested, to learn how little he apparently knows about his own religion's stance on the question of evolution and creationism. For both his views on evolution and on social issues, such as homosexuality and abortion, Buchanan told *GQ*, "that he could not 'contradict the body of dogma of the [C]hurch'" (ibid. 237), however his proclamations on evolution are distinctly at variance with both the current and historical positions on evolution in Roman Catholicism. [Ed. *Readers are referred to Voices for Evolution*, p. 97 for a statement from Pope John Paul II on evolution and the relevance of scriptural passages to understanding the place of humans on earth.] Furthermore, an editorial in *Commonweal*, a liberal Roman Catholic publication, urged Catholics to "reject Buchanan's social policies and moral absolutism" (March 8, 1996; p. 5).

Buchanan weaves these and other issues—foreign trade, protection-

ism, monetary policy—into a tapestry that delineates his "cultural war"—wrest power back from the liberals and left wing. In a campaign speech in the fall Buchanan told the crowd, "I tell you, we don't need some miserable secular humanist in sandals with beads at the Department of Education telling us how to educate America's children!" (ibid. 233). When *GQ*'s John Judis asked him why he had backed away from his call to "religious war" in the 1992 campaign, Buchanan replied, "The cultural war is a religious war" (ibid. 237).

Furthermore it seems that not only the liberals and progressives are getting nervous. In his column published in the Wisconsin State Journal on February 22 George Will wrote, "Buchanan[s] . . . protectionism is to serious economics as creationism (another of Buchanan's superstitions) is to biology." From Will's comments in this particular column, it seems as though biology and chemistry are not the only fields where Buchanan ignores an established body of knowledge.

It is also clear from events in Alabama (see p. 10), Georgia (see p. 8), Tennessee (see p. 6) and elsewhere around the country that Buchanan has tapped into a powerful sentiment about what is wrong with the country and that the way to fix it is to take the country back—to return to "traditional" American values and institutions. In his column, Will refers to many of these positions as "eccentric" and ignorant of contemporary historical, political, and economic realities, as though the

BUCHANAN continued on p. 4

▼

For those wishing to know more about the candidate's stand on evolution, Buchanan's home page is <http://www.buchanan.org/> There's a link to his Message Board where you can leave a message and also read messages others have left him.

▲

If evolution is a fact, then why are there still monkeys?

Hank Langknecht

"If evolution is a fact, then why are there still monkeys?"

"If Genesis is a fact, then why are there dinosaur bones?"

If you've been kept awake at night by questions such as these, then exercise more during the day and drink some warm milk before bed because what I say about this sort of thing is probably not going to put your mind at ease. In deference to my prehistoric ancestry I'm going to go out on a limb here and say that faithful Christians are free to accept any theory, discovery, hypothesis, or insight, that science makes. Christians are free to watch Carl Sagan. Christians are free to buy the Big Bang, dig dinosaurs, embrace evolution, and even put Ned Neanderthal at the tippy-top of their family tree.

BUCHANAN continued

candidate learned nothing from his years with the Nixon and Regan administrations. Whatever the analysis, it is clear that Buchanan has tapped into a strong and sizable sentiment that includes teaching creationism in the schools and that, even though he has been unsuccessful again this year in becoming the Republican nominee for President, his organization and the sentiments of his supporters and sympathizers will leave their mark on the land. They will remain a force to be reckoned with.

Report compiled by Andrew Petto and John Cole with contributions from Kevin Padian, Dorothy Cattle, Molleen Matsumura, and Jeffrey Shallit. ■

Is this driving you bananas? Maybe a reminder about one of the little "whoopsies" of the Church history will help. Maybe. In the early 17th Century the Church declared the works of Nicolaus Copernicus and Galileo Galilei to be heretical. Why? Because their scientific observations "violated" Biblical teaching. They dared to assert that the Earth was *not* the center of the solar system, the sun was. Imagine. Now consider the fact that no modern "Biblical literalist" would ever insist that we return to believing that the sun and moon are attached to a hard clear surface (the firmament of the heavens) which surrounds the earth and turns while the earth stands still.

Copernicus and Galileo did not set out to undermine Biblical authority. They were not up to any monkey business. They were just these two guys trying to figure stuff out.

Cosmogony itself speaks to us of the origins of the universe and its makeup, not in order to provide us with a scientific treatise, but in order to state the correct relationship with God and with the universe. . . . Any other teaching about the origin and makeup of the universe is alien to the intentions of the Bible, which does not wish to teach us how heaven was made but how one goes to heaven. [Address to Pontifical Academy of Sciences on 3 October, 1981. Excerpted from *Voices for Evolution*, Berkeley, CA: NCSE, 1995, 97.]

The same is true of people who do science today. Big bangs, big crunches, evolution, dinosaurs, quarks, gluons, and black holes are not scientific creations aimed at destroying faith. They are names given to the stuff that scientists find, often when they are looking for something else.

Religion and science are playing different games on different fields. Yes, religion occasionally hits a foul ball that throws a monkey wrench into the game scientists play; and yes, science does occasionally hit a home run that smacks a player in the field of religion smack in the back of the head. But no, science and religion are not playing the same game, nor are they playing it on the same field.

Science writes the book for a game that is played on a certain kind of field; where things have meaning if they have to do with the physical universe and with things that are objective, and observable, and controlled, and predictable, and reproducible. Religion wrote a Book for a game that is played on a different field where things have meaning if they have to do with God and are relational, and subjective, and paradoxical, and ambiguous, and covenantal, and faithful. When it comes to reality, science and religion render different meanings. Both meanings are right. Both meanings are true. But they are different. If you don't believe me, just try asking a scientist to prove whether or not two people are in love.

Religious truth that is threatened by science ain't Truth just like scientific facts that are threatened by religion ain't facts. If science threatens something that you think

IF EVOLUTION continued on next page

School Board Takeover Thwarted in Virginia

Douglas McNeil

On Nov. 7, 1995, voters in Fairfax County, Virginia, rejected an attempted takeover of its 12-member school board by 11 creationist candidates. Only three creationists were elected, leaving them far short of a majority. Fairfax County, with 143,000 students, is the 11th largest school district in the country.

School boards in Virginia have been appointed since the 1960s. When state law was changed recently to allow local option, Fairfax County, a suburb of Washington, DC, chose to elect its board. Thirty-five candidates, including 11 creationists, ran for the board, with nine seats elected from single-member districts and three elected at large. The election was officially non-partisan, but both political parties endorsed full slates, much to the resentment of many voters. The Republican Party, which is controlled by the Religious Right in Virginia, endorsed ten creationists for the 12 seats.

The press was slow to pick up on creationism as an election issue. The *Washington Times* had been running a balanced letters-to-the-editor duel over creation and evolution since Sept. 3, but this was a coincidence unrelated to the election. On Oct. 21 the *Washington Post* printed a front page story on the issue. The *Fairfax Journal*, a local daily, began covering it, and the *Washington Times*, which had mostly ignored the election, ran a heavily pro-creationist news story. More than 25 letters to the editor were printed in the three newspapers. After the *Post* story broke, political talk shows almost invariably

mentioned it when discussing the election.

The Democrats were also slow to pick up on the creationism issue, not realizing that it would work strongly in their favor in this upscale, well educated community. Candidates began bringing it up at every forum, and finally the party did a 10,000 piece-mailing, which some creationists insisted misrepresented their position. In the end, three of the 11 creationists were elected. Preliminary analysis indicates that creationism was only one of several major issues and shifted the vote by roughly 5%.

Of the three creationists who were elected, Gary Reese, an incumbent in the Sully District, beat his opponent 56-44% in a one-on-one race; the other two were squeakers in multiple-candidate races. With five candidates seeking a single seat in the Springfield District, Carter Thomas won by 1.7% over his nearest opponent, who was not a creationist. Mychele Brickner, running at-large among eleven candidates seeking three seats, came in third with less than 0.2% over her nearest non-creationist opponent.

Had the press picked up on this issue a little earlier, perhaps only Reese would have been elected. Had creationism not been an issue, one more creationist might have won—Douglas Barylski in the Mason District, who lost by 6.8%. The other creationists were defeated by substantial margins and probably would have lost in any event.

The lessons from this election are clear: if creationism isn't an issue, make it one, and do so as early as possible. Letters to the editor are widely read and influential. Re-

member, you don't have to win the debate, just raise the issue. Generally, moderates will avoid creationism like the plague.

[The creationist packet, containing most of the published letters and news stories, is available free to NCSE members. Send a postcard to Douglas McNeil, 1517 S. Charles St., Baltimore, MD 21230.] ■

IF EVOLUTION continued

is an important religious truth, relax and let it go, it was an idol all along. If science *confirms* something that you thought might be a religious truth then science itself is that idol. If the scientific discovery of a means by which a woman could get pregnant with a male child without benefit of intercourse would restore your faith in the virgin birth of Jesus then you are playing ball on the wrong field.

As Christians we can freely acknowledge and enjoy the truths brought to bear by scientific inquiry. Heck, we can even join in . . . become Christian scientists . . . (just keep that "s" lower case!). We are free because we accept, by faith, that the truths that will guide us, and the universe, into the deepest, richest, most abundant life are those Truths revealed to us by God.

Finally, to answer the questions with which I started: God created monkeys and dinosaur bones as a way of testing us to see if we would fall for the scientific explanations. Not!

[Reprinted with permission from the September 1992 Newsletter of the First English Lutheran Church in Marysville, Ohio, where the author is pastor.] ■

Tennessee Upset:

Molleen Matsumura

In November, 1995, Vanderbilt University in Nashville, Tennessee observed the seventieth anniversary of the famous "Scopes trial" in which a Tennessee teacher was convicted and fined for teaching the theory of evolution. Just a few months later, in early February, Rep. Zane Whitson (R, Unicoi) and Sen. Tommy Burks (D, Monterey), introduced a bill that said, "No teacher or administrator in a local education agency shall teach the theory of evolution except as a scientific theory. Any teacher or administrator teaching such a theory as fact commits insubordination...and shall be dismissed."

Introduced at a time when the Tennessee legislature was also considering a resolution to post the Ten Commandments on public buildings, the "monkey bill's" religious motivation was never hidden. John Hannah, chairman emeritus of Tennessee's Christian Coalition commented, "At the same time that evolution is being taught as fact in public schools, our society has deemed it unconstitutional to teach the theory of creation... (*Nashville Tennessean*, Feb. 13, 1996), and an NCSE member attending a (Tennessee) House Education Committee meetings reported that Whitson commented that perhaps opponents were "not as much believers" as he. When the

bill was sent for consideration by the full house and senate, there had been only one opposing vote in each of their education committees, and the legislation seemed destined for victory.

Instead, in the glare of national and international publicity, the bill became a political football. ABC's "World News Tonight" covered the story, including an interview with NCSE Executive Director Eugenie Scott. A *New York Times* reporter called NCSE for information used in his front-page story on the legislation. BBC Channel 5 interviewed Network Project Director Molleen Matsumura, and reporters for several independent newspaper and radio stations called NCSE for more information. Editorialists condemned the bill for intimidating teachers, and the *Johnson City Press* reported (February 29, page 1) that teachers "already avoid controversy" by skipping any discussion of human evolution. A Nashville biology teacher, Wesley Roberts, stepped forward to say that he would challenge the bill, explaining, "Teachers will be afraid . . . , so students will miss a portion of their basic science curriculum" (*Park City Daily News*, March 5, 1996, p. 1).

After proposing a variety of amendments, the state senate returned the bill to its education committee. The bill was further amended in committee by adding such narrow definitions of "fact" and "theory" that it appeared the law would require publishers to create a unique textbook for use only in Tennessee. When the financial implications of this change threatened to reroute the bill to the finance committee (where it might have died qui-

Tennessee's "Only a Theory" Act

SENATE BILL 3229

AN ACT to amend Tennessee Code Annotated, Section 49-5-501 and Title 49, Chapter 6, Part 10, relative to the teaching of the theory of evolution.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE: SECTION 1. Tennessee Code Annotated, Title 49, Chapter 6, Part 10, is amended by adding the following new section thereto:

Section 49-6-1012. No teacher or administrator in a local education agency shall teach the theory of evolution except as a scientific theory. Any teacher or administrator teaching such theory as fact commits insubordination, as defined in Section 49-5-501(a)(6), and shall be dismissed or suspended as provided in Section 49-5-511.

SECTION 2. Tennessee Code Annotated, Section 49-5-501(a)(6), is amended by redesignating subdivisions (C) and (D) to be subdivisions (D) and (E) and by adding a new subdivision (C), as follows: (C) Violation of the provisions of Section 49-6-1012, relative to the teaching of evolution;

SECTION 3. This act shall take effect upon becoming a law, the public welfare requiring it.

"Monkey Bill" Law Defeated

etly), the amendment was removed during debate on the senate floor. Observers told NCSE that it seemed nearly certain that the bill would pass after all, even as late as the evening of March 27.

On March 28, however, after five hours of debate, the bill was defeated by a vote of 20-13. The issues underlying the vote seemed clear—legislators worried that Tennessee would seem like a backward state, and new businesses would be discouraged from locating there. Lieutenant Governor Wilder said, "I can't vote for this bill, but I don't want anybody to think I don't know God (*Boston Globe*, March 29, 1996, p. 3). It isn't entirely clear

how Tennessee voters perceived the issue. Most voter opposition seemed aimed at the bill's intimidation of teachers.

Possibly the best news is not that this bill was defeated, but that its introduction has opened public discussion on the role of evolution in the curriculum in Tennessee and elsewhere. Faculty senates at Eastern Tennessee State University and the University of Tennessee at Chattanooga have passed resolutions supporting academic freedom, and a similar resolution is in the works at Vanderbilt University. Teachers who were describing evolutionary processes without using the "E word" and were avoiding

any mention of *human* evolution have made their concerns public. And, citizens in other states are watching more carefully for signs of local creationist activity.

NCSE closely monitored the situation in Tennessee, making sure the press, civil liberties organizations, and our own members were fully informed. Jim Moore, Niall Shanks, Cindy Gresham, Carter Pate, and Olle Pellmyr are only a few of the Tennessee members who did the work that only people "on the ground" can do—educating their legislators, policy makers, local media, and fellow citizens and providing NCSE with detailed information as events unfolded. ■

Buying the titles listed in our Resources Center-fold through NCSE saves you money *and* benefits NCSE. You receive a **20% discount** for ordering through the Center, and NCSE earns money from each sale. Consider ordering books for your classes, workshops, and other groups. Contact Teresa Kim at NCSE for more details.

ICR's Statement on "Man Tracks"

One of my students saw the NBC TV show "Mysterious Origins of Man" (I didn't) and said that the Paluxy tracks were featured [see cover article]. I pointed out that even Christian creationist spokesmen had backed away from that claim. I was able to point to the current issue of *ACTS AND FACTS* from the Institute for Creation Research (Vol 25 #3, March 1996). In an article by John Morris:

Another research project of some note involved the alleged discovery of human and dinosaur footprints in the Paluxy River, central Texas. Having been nominally involved since the late 1960's, I undertook a major role in 1975 from nearby Oklahoma, culminating in a summary book, *Tracking Those Incredible Dinosaurs, and the People Who Knew Them*, in 1980. The book was withdrawn in 1985 when further research called the original interpretation into question. Research continues, but I am of the opinion that the evidence is, at best, ambiguous and unusable as an anti-evolutionary argument at the present time.

—Brian Alters

[Ed. Because John Morris recently succeeded his father, Henry Morris, as president of ICR, this is about as close to an official ICR position as one can expect on this issue.]

Georgia: Creationism Pushed

Molleen Matsumura

Georgia was one of two states that was in the spotlight of national attention this March when creationism was considered in the state legislature [see related story from Tennessee on page 6]. The situation in Georgia, though less dramatic, was just as important as the one in Tennessee. In Georgia the creationist legislation was not an independent bill, and it never threatened to punish teachers, but it illustrated another powerful strategy for using the legislative process to force creationism into the schools.

Georgia's creationist legislation was attached as a rider to another, very popular bill to give it a greater chance of succeeding. According to the *Atlanta Journal* (February 9, 1996, p. C1, "GOP Adds Creationism Rider to Family Violence Bill"), "It's a tactic . . . [of] . . . hijacking bills on the house floor. . . . [Rep. Bryan] Joyce had planned to offer separate creationism legislation next session and acknowledged it would have been difficult to pass." Joyce's solution was to add an rider to a bill authorizing programs for teaching about family violence. Joyce's amendment would have authorized local school boards to adopt creationist curricula. Instead, the amendment became an obstacle to the passage of the bill, and the bill failed.

It is good news that Joyce's proposal was defeated. It is also good news that many Georgia legislators understood that the legislation would damage science education and potentially damage the state's economy by discouraging "hi-tech" businesses from locating there. But it is not the end-

of the story. The introduction of creationist legislation at the state level is a symptom, not a cause, of intense creationist sentiment that is expressing itself in other ways. Two Georgia school districts have considered creationist curricula in recent months, and the superintendent of schools is clearly sympathetic.

In Hall County, Rep. Joyce's home district, the school board voted unanimously to teach creationism alongside evolution and ordered the district's textbook adoption committee to submit a list that included books "that explain, discuss, and evaluate various theories on the origin of life, including . . . creation science." The board made this decision at about the time that the state legislation was introduced. Any books adopted would be used for a six-year period in a district of approximately 17,000 students. Area scientists, led by Gainesville College biologist and NCSE member John Hamilton, actively opposed the school board's decision, educating the community about the scientific issues and making sure the Board understood that there would be a lawsuit if creationist books were approved. (There are no creationist books on the list approved by a state textbook commission in late 1995.) Just before this issue of *NCSE Reports* was completed, the Board reconsidered their decision, and rescinded the order for selection of creationist textbooks by a 3-2 vote.

In Oconee County, home of the University of Georgia campus in Athens, a citizens' committee was appointed to review science teachers' curriculum recommendations to the school board. One

member of that committee is a local citizen who is suing the county library for refusing his donation of a creationist journal. Shortly after this member was appointed, the committee considered requiring that a "message" be included in the syllabus of each science course, given to students and parents, and possibly pasted into science books. The message was almost identical to the textbook disclaimer adopted by Alabama's Board of Education in late 1995.

As of early April that disclaimer and a much milder letter to parents have been rejected by the full review committee, and an outline of a possible creationist curriculum has been referred back to the district's curriculum committee for further study. However, University of Georgia anthropologist Pete Brosius reports that the school board has at times disregarded the recommendations of its committees. Brosius and other local activists are prepared to oppose any disclaimer that might be introduced at the board meeting, noting that a written textbook disclaimer had to be discarded in Texas some years ago and a verbal disclaimer prescribed by a Louisiana school board is currently under legal challenge.

When Joyce's legislation made creationism in Georgia front-page news, state Superintendent of Schools Linda Schrenko requested an official opinion from the state's Attorney General Michael J. Bowers, asking, in part, "If we teach only evolution, we are at cross purposes with what many parents teach at home and certainly what is taught in our churches. Do we have the right to do so?" Bowers replied, in part,

at State and Local Levels

“various theories regarding the origin of humankind may be validly taught *only* if there is a ‘clear secular intent’ ” This exchange outlines the possible course of future creationist efforts in Georgia. Schrenko identifies the presence of real and active creationist sentiment, and, like the Supreme Court decision it cites (*Edwards v. Aguillard*), the Attorney Gen-

eral’s reply suggests a course creationists are *likely* to pursue—introducing the creation science euphemism, “scientific evidence against evolution.”

While celebrating significant victories in defending good science education in Georgia, we will need to be watchful for new challenges there and elsewhere.

[Applause and thanks to Dr. John Hamilton, Dr. Pete Brosius, and many others, both for their hard work in defending good science education, and for providing information used in this story.] ■

NBC continued from p. 1

example, Kevin Padian explored the claims of slippage of the earth’s crust for *NCSE Reports*. If the ice on Antarctica a mile thick, that extra mile is supposed to cause the whole crust (the diameter of the globe is nearly 8000 miles) to unbalance. This relatively small anomaly is supposed to cause the crust to slip “like the skin of an orange” and cause the crust to wind up somewhere else—moving the crust and the overlying biome great distances. Despite the inappropriateness of this particular fruit as an analogy, there is no other instance of crustal movement on this scale or even of this type.

Furthermore, ice samples from Antarctica have yet to uncover any trace of Atlantis, while dating the samples to 150,000 years, thus refuting the claim that Antarctica was warm home for Atlantis some 12,000 years ago) [*Science*, Vol. 259, 12 Feb. 1993, pp. 926-934]. Further, *Science News* reported that “most climate experts regard East Antarctica’s ice as a remarkably stable feature that has persisted for at least 14 million years” [Feb. 24, 1996, p. 117].

I have to wonder, “How on Earth did such a program make it to a network broadcast? Did they send

a preview tape to *any* qualified scholars? An arcane office typically called “Network Standards and Practices” often imposes inane censorship on broadcasts in order to avoid giving offense to anyone; I oppose such censorship. However, I wonder if there was anyone at home when this show was vetted. It is truly an attack on science, scientific values, and the reputation which networks like to cultivate about themselves as public servants committed to basic levels of honesty.

With contributions from Kevin Padian, Glen Kuban, Michael

Shermer, Carl Zimmer, and David Thomas

[Ed. Look for a continuing discussion of specific issues and claims raised in the NBC Special in the next issue of NCSE Reports. John’s comments as a professional archaeologist illustrate an important strategy in reviewing, commenting on, and refuting presentations such as this one—each of us should focus on those areas in which we are most knowledgeable and stay within the area of our professional expertise.] ■

NBC’s “Please comment on our programming” Web site is <http://www.nbc.com/mail.html>.

The promotional web site for this production (and other related ideas and concepts) is <http://www.bcvideo.com/bcvideo>.

The Web Site for *Forbidden Archeology* is <http://nersp.nerdc.ufl.edu/~ghi/fa.html>

Glen Kuban’s summary of the “man-tracks” controversy is found in the talk.origins archive at <http://rumba.ics.uci.edu:8080/faqs/paluxy.html>.

Glen also informed us that a more general menu of creationism-related articles is found at <http://rumba.ics.uci.edu:8080/faqs/>.

State of Alabama

Eugenie C. Scott

In November of 1995, the Board of Education of the state of Alabama, encouraged by religious right leader Phyllis Schlafley's Eagle Forum and governor Fob James, passed a resolution requiring that all biology textbooks used in Alabama include a disclaimer regarding the topic of evolution. The disclaimer was the final volley in a lengthy shoot-out between the Board and a group of Alabama Academy of Sciences scientists which began last spring. At that time, public hearings began on the Alabama kindergarten-12th grade science curriculum guide, the "Alabama Course of Study-Science" (COSS).

The COSS, developed by teachers and scientists in the state, ex-

Project 2061 is the initiative that outlined what all high-school graduates should know and be able to do in science. First published in their 1989 report, *Science for All Americans* and followed by *Benchmarks for Science Literacy* as a curriculum design tool to achieve these goals, the group from the American Association for the Advancement of Science is now working on a two-part CD-ROM entitled *Resources for Science Literacy*. The CD-ROM tool is designed to offer a wide variety of information in science, mathematics and technology, further explanation of science literacy goals for K-12 education, and curriculum material recommendations.

pressed pretty much the same ideas being found in many state curricula around the country, reflecting many of the ideas of the American Association for the Advancement of Science's (AAAS) *Project 2061* and the National Science Standards. COSS included the directive that evolution was to be taught, as do all of these science reform recommendations. This directive, as well as the experiential education and the "less is more" approach (which means "depth over breadth," not "students learn less"), were hotly opposed by the Eagle Forum and the Governor. Fortunately, most of the evolution requirements remained in the COSS when the dust had settled in early summer, and by the end of summer, most of the books the teachers wanted to adopt had been adopted—though not without a struggle. Some last minute attempts to sneak creationist books onto the approved list—after the public hearings—were fortunately defeated.

As a final slap to good science in Alabama, the board adopted with few modifications a disclaimer statement that it claims is intended to "help students keep an open mind on this topic;" but its actual effect will likely be to make evolution a "controversial issue" that teachers will be less likely to teach. Here is the text of the message:

A MESSAGE FROM THE ALABAMA STATE BOARD OF EDUCATION

This textbook discusses evolution, a controversial theory some scientists present as a scientific explanation for the origin of living

things, such as plants, animals and humans. No one was present when life first appeared on earth. Therefore, any statement about life's origins should be considered as theory, not fact. The word "evolution" may refer to many types of change. Evolution describes changes that occur within a species (White moths, for example, may "evolve" into gray moths). This process is microevolution, which can be observed and described as fact. Evolution may also refer to the change of one living thing to another, such as reptiles into birds. This process, called macroevolution, has never been observed and should be considered a theory. Evolution also refers to the unproven belief that random, undirected forces produced a world of living things.

There are many unanswered questions about the origin of life which are not mentioned in your textbook, including:

Why did the major groups of animals suddenly appear in the fossil record (known as the "Cambrian Explosion")?

Why have no new major groups of living things appeared in the fossil record for a long time?

Why do major groups of plants and animals have no transitional forms in the fossil record?

How did you and all living things come to possess such a complete and complex set

Distorts Science, Evolution

of "instructions" for building a living body?

Study hard and keep an open mind. Someday, you may contribute to the theories of how living things appeared on earth.

The Alabama disclaimer is wrong in virtually every sentence. In the first line, alone, the statement errs several times. First, it claims that evolution is a "controversial theory," which it certainly is *not* in science. Continuing, "a theory some scientists present" is accurate only if by some they mean approximately 99%. But the "origin of living things" is *not* a central part of evolution, which deals more with what happened to life *after* it emerged than with its origin. It is also inaccurate to limit the concept of evolution to only living things: after all, stars and galaxies evolve just as do starfish and galagos. The first sentence, then, has an error in virtually every clause; surely a record even for creation science writings!

Things don't improve as one reads farther. The "No one was present when life first appeared on earth" therefore evolution is questionable, is pure creation "science," though religion is never mentioned anywhere. A major tenet of this particular pseudoscience is a peculiar, limited view of science: if it's not directly observable and directly experimental, it's not "real" science. Thus Duane Gish of the Institute for Creation Research can say with a straight face, "neither evolution nor creationism is scientific because no one was there to see it happen." Of course, if only directly observable phenom-

ena can be the subject of science, then particle physics, a great deal of astronomy, and most of geology are not sciences. This "fact based" view of science is highly suspicious of inference, which of course is necessary in historical sciences like evolution (and other sciences in which direct observation is not possible). It is by no means an *inferior* mode of discovery.

The "no one was present" passage cited above is a classic rendition of this approach, only it compounds the error by distorting what "theory" and "fact" mean in science. I like to remind people that all disciplines have terms of art. In law, "person" is a term of art, referring to General Motors but not to a human fetus. In science, "theory" is a term of art, referring to a well-corroborated *explanation*. On the street, theory may refer to a "guess" or "hunch," but not in science. To creationists (and surely to the authors of the Alabama disclaimer), "theories" are guesses, but "facts" are rock

solid and immovable. In science, both theories and facts may change with better information or new ways of looking at data.

The next set of errors occurs when the authors stumble through defining the word "evolution," but space limits me. Suffice to say here that white moths do not evolve into gray moths, and a reptile does not change into a bird. There are lots of transitional fossils and answers to the Cambrian explosion query and the rest. If one is familiar with creation science, one can see its footprints all over this document: the four bulleted questions at the end are chapter and verse from creation science and its variant, "intelligent design theory."

Yes, Alabama students will open their biology textbooks to nonsense next fall, but of more concern is the chilling effect such a disclaimer will have on the willingness of teachers to teach an important subject: evolution. ■

NCSE Reports welcomes letters from its readers via mail, fax, or email. In writing to our editors, please keep in mind the following.

1. Letters of 200 words or fewer are more likely to be printed in their entirety. The editors reserve the right to edit letters for content and style.

2. All letters must be signed, though the

writer's name may be withheld upon request.

3. All letters must contain a return address, although only the writer's affiliation (if any) and city and state will be published. We would appreciate the inclusion of a daytime phone or fax number or email address, in case we need to contact you.

4. Any quotations or excerpts of text not appearing in previously published NCSE sources must be accompanied by sufficient information for the editors and our readers to be able to locate the original source.

5. The publication of *all* letters to the editor is at the discretion of the NCSE editorial staff and board.

• RESOURCES •

Books

	LIST	MEMBERS		LIST	MEMBERS
Berra, <i>Evolution and the Myth of Creationism</i>	8.95	7.25	McGowan, <i>In the Beginning. . . A Scientist Shows Why the Creationists Are Wrong</i>	19.95	16.00
Bowler, <i>The Non-Darwinian Revolution</i>	12.95	10.35	McIver, <i>Anti-Evolution, An Annotated Bibliography</i>	15.95	12.75
Cartmill, <i>A View to a Death in the Morning</i>	*29.95	23.95	McKown, <i>The Mythmaker's Magic</i>	25.95	20.75
Clark, <i>Evolution and Cultural Literacy</i>	7.00	5.60	Miller & Van Loon, <i>Darwin for Beginners</i>	9.00	7.00
Dalrymple, <i>The Age of the Earth</i>	24.95	19.95	Moore, <i>Science as a Way of Knowing: The Foundations of Modern Biology</i>	32.50	26.00
Dawkins, <i>The Blind Watchmaker</i>	10.95	9.50	Nesse & Williams, <i>Why We Get Sick</i>	*24.00	19.25
Dawkins, <i>River Out of Eden</i>	*20.00	16.00	Newell, <i>Creation and Evolution: Myth or Reality?</i>	12.95	10.35
Deford, <i>A Reparation: Universal Gravitation a Universal Fake</i>	6.00	4.80	SPECIAL Quammen, <i>The Flight of the Iguana</i>	*19.95	9.00
Dennett, <i>Darwin's Dangerous Idea</i>	*30.00	24.95	Raup, <i>Extinction: Bad Genes or Bad Luck?</i>	10.95	8.75
Desmond & Moore, <i>Darwin. The Life of a Tormented Evolutionist</i>	*34.00	27.25	Robinson & Tiger, eds. <i>Man and Beast Revisited</i>	17.95	14.50
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Ecker, <i>Evolutionary Tales</i>	14.95	12.00	NEW Shreeve, <i>The Neanderthal Enigma</i>	*25.00	20.00
Eldredge, <i>The Miner's Canary</i>	*20.00	16.00	Strahler, <i>Science and Earth History, the Evolution/Creation Controversy</i>	*51.95	41.50
Eve and Harrold, <i>The Creationist Movement in Modern America</i>	13.95	11.15	Strahler, <i>Understanding Science</i>	*27.95	22.25
Godfrey, <i>Scientists Confront Creationism</i>	11.95	9.50	Tattersall, <i>The Fossil Trail</i>	*25.00	20.00
Goldsmith, <i>The Biological Roots of Human Nature</i>	16.95	13.50	Tattersall, <i>The Human Odyssey</i>	*27.50	22.00
Gould, ed. <i>The Book of Life</i>	40.00	32.00	NEW Thomson, <i>H.M.S. Beagle: The Story of Darwin's Ship</i>	*25.00	20.00
Gould, <i>Bully for Brontosaurus</i>	11.95	9.55	Toumey, <i>God's Own Scientists</i>	16.00	13.00
Gould, <i>Ever Since Darwin</i>	10.95	8.75	Webb, <i>The Evolution Controversy in America</i>	*34.95	28.00
Gould, <i>The Panda's Thumb</i>	10.95	8.75	Weiner, <i>The Beak of the Finch: The Story of Evolution in Our Times</i>	13.00	10.50
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Howells, <i>Getting Here</i>	19.95	15.95			
Jones et al. <i>The Cambridge Encyclopedia of Human Evolution</i>	34.95	28.00			
Kauffman, <i>The Origins of Order</i>	33.75	27.00			
Larson, <i>Trial and Error</i>	10.95	8.95			
Lewin, <i>The Thread of Life</i>	19.95	15.95			
Matson & Troll, <i>Planet Ocean</i>	19.95	15.96			
Maynard Smith, <i>Did Darwin Get it Right?</i>	18.95	16.25			
Mayr, <i>One Long Argument: Charles Darwin and the Genesis of Evolutionary Thought</i>	14.00	11.25			
McCollister, ed., <i>Voices for Evolution</i>	10.00	8.00			
McGowan, <i>Dinosaurs, Spitfires and Sea Dragons</i>	14.95	12.00			

Kids' Books

Barker, <i>Maybe Yes, Maybe No</i>	12.95	10.25
Cole, <i>Evolution</i>	4.50	3.60
Jackson, <i>The Tree of Life</i>	*14.95	11.95
Peters, <i>From the Beginning, The Story of Human Evolution</i>	*14.95	11.95
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1988 AAAS Pacific Division Symposium	3 tapes	15.00
"Communicating Evolution to the Public"		
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1976 K. Mather, <i>The Scopes Trial</i>	1 tape	4.00
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• RESOURCES •

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These listings often include items available from NCSE, but the list changes with each issue. Consult back issues for other resources—they are still in our files and available for distribution even if we can't keep listing them!

Buell, Jon, and Virginia Hearn, eds. 1994. *Darwinism: Science or Philosophy?* Richardson, Texas: Foundation for Thought and Ethics. vii + 229pp, \$37.50. Balanced collection of papers by scientists and philosophers in both pro- and anti-evolution camps.

Chiappe, Luis M. 1995. The first 85 million years of avian evolution. *Nature* 378:349-355. Review article.

Davidson, Eric H., Kevin J. Peterson, and R. Andrew Cameron. 1995. Origin of Bilateral Body Plans: Evolution of Developmental Regulatory Mechanisms. *Science* 270:1319-1325. Genetic mechanisms for body plan development give clues to Precambrian phylogeny.

Kim, Kyung-Man. 1994. *Explaining Scientific Consensus: The Case of Mendelian Genetics*. New York: The Guilford Press. xxiv + 239pp, \$37.95. Historical analysis of the biometricians-Mendelians controversy.

Panganiban, Grace, Angela Sebring, Lisa Nagy, and Sean Carroll. 1995. The Development of Crustacean Limbs and the Evolution of Arthropods. *Science* 270:1363-1366. Evidence of a genetic mechanism which controls limb development of arthropods indicates the group had a common origin.

Rossi, John Allen. 1996. Creating Strategies and Conditions for Civil Discourse about Controversial Issues. *Social Education* 60(1):15-21. Presents strategies and instructional materials for teaching controversial issues.

Whitfield, L. Simon, John E. Sulston, and Peter N. Goodfellow. 1995. Sequence variation

of the human Y chromosome. *Nature* 378:379-380. Discusses using the Y chromosome to measure divergence dates in human evolution.

Wray, Gregory A. 1995. Punctuated Evolution of Embryos. *Science* 267: 1115-1116. Developmental sequences are not all genetically conservative. ■

Publications Available

Copies of the following publications by The Oak Hill Free Press, Pasadena, CA can be obtained from:

Dave Matson
P.O. Box 61274
Pasadena, CA 91116
(check or money order can be made out to Dave Matson)

Bible Errors. 47pp, \$3.80. ASCII diskette, \$4.00.

Is the Bible the Word of God? 39pp, Free with \$14.00 purchase.

How Good are those Young-Earth Arguments? 103pp, \$14.50. ASCII diskette (text only), \$7.00.

The Perfect Mirror? (Is the Bible the perfect mirror of God's thoughts?) 125pp, \$14.00. ASCII diskette, \$7.00.

The Seven Mighty Blows to Traditional Beliefs. 262pp, \$18.00.

A Few Sedimentary Problems For Noah's Flood. 5pp, \$2.00.

Radiometric Dating and Woodmorappe's List of Bad Dates. 7pp, \$2.00.

A Short List of Evolutionary Transitional Forms. 12pp, \$2.50.

On Taking the Bible and Noah's Flood Literally. 7pp, \$2.00.

Errors of Reasoning. 10pp, \$2.50.

The Flood. 3pp, \$2.00.

Calculating Those Odds. 6pp, \$2.00.

The Bauble Box. 10pp, \$2.50.

For short items, an ASCII diskette may be ordered for the regular price plus \$1.00.

Getting the Acts and Facts Straight: Evolution Still a Theme at the Tulsa Zoo

Molleen Matsumura

If you are one of the many NCSE members who worried when the Institute for Creation Research (ICR) wrote in the January, 1996, *Acts and Facts* that the Tulsa Zoo had removed exhibits on horse evolution, take heart! NCSE "went straight to the horse's mouth," and there we learned a different story.

According to the ICR, Tulsa architect Dan Hicks successfully persuaded city officials to remove exhibits about horse evolution and about human evolution. Hicks was supposed to have relied on materials supplied by ICR, the support of a poll showing that over 2/3 of the city's population did not want the zoo to "promote" evolution, and a petition with 2000 signatures.

David G. Zucconi, Director of the Tulsa Zoo and Living Museum, told us that, contrary to the story in *Acts and Facts*, "I am unaware of a 'scientifically conducted poll' representing two-thirds of either population number" (referring to the Tulsa City population of 380,000, and the population of 745,000 within the greater metropolitan area). Zucconi confirmed that petitions were submitted with approximately 2,000 signatures (less than three-tenths of one percent of the population). Furthermore, the zoo's Museum Curator, Charles Rippey, explained that most signatures had been gathered outside of Tulsa in the suburb where Hicks attends church. Leaders in the city government and in the Parks Department, joined Zucconi and Hicks at a meeting where, according to Zucconi, "The general

tone of our meeting expressed a need for sensitivity to the beliefs of different groups, but confirmed that scientific principles could not be ignored or watered down."

Zucconi reported that the Zoo did not remove the sign on horse evolution, but did "modify [it] to more completely reflect current scientific thought, using the writings of Dr. Bruce McFadden," who is associated with the University of Florida and the American Museum of Natural History. Local television reports of extensive changes in signage gave the wrong impression,



"scientific principles
could not be
ignored or watered
down"



according to Rippey, because they showed Dan Hicks holding up one of his own proposed signs during a voice-over reading of the zoo's statement. Hicks had also contacted Prof. McFadden, apparently giving the impression that he was on the zoo's staff, when in fact he is a member of a community group called "Friends of the Zoo."

The zoo also changed one line of the signage in the chimpanzee exhibit. Text that had read, "Scientific blood tests show that chimpanzees are man's closest biological relative, branching off from a common ancestor about 6 million years ago," was changed to "Scientific blood tests, including DNA analysis, show a bio-

logical similarity between chimpanzees and people." While NCSE staff think it is regrettable that chimpanzees are no longer described as sharing a common ancestor, the zoo's position is that the more simplified sign actually presents the evolutionary concept more forcefully.

It is interesting that the zoo was not pressed to change any signs in the elephant exhibit, though they also discuss evolution. This is a reminder that discussion of *human* evolutionary history is difficult for many people who are not bothered by the idea of evolutionary relationships among other species.

The *Acts and Facts* article says Hicks suggested that other readers could start similar projects. They would not be the first to do so. NCSE has recently been receiving more inquiries from zoo educators, and we've even seen an article circulating on the Internet, suggesting that visitors to the new Prehistoric Journey exhibit at the Denver Museum of Natural History ask docents the familiar creationist question, "Why are transitional fossils not found in the fossil record?"

Clearly, informal education centers that teach about evolution will need support, whether it's just a note in the suggestion box saying you appreciated their exhibit (because they *do* hear from offended creationists), or active participation in the zoo or museum's organization of supporters. NCSE is working with informal educators to find ways to encourage good evolution education in zoos, museums, and nature centers. ■

One Day Wonders

Molleen Matsumura

Some of the local challenges with which NCSE assists last for months or even years; for example, the attempt to place the creationist textbook *Of Pandas and People* in the schools of Louisville, Ohio, began in mid-1993 and has been continuously opposed by local NCSE activists. Others are resolved more quickly. In February, 1996, NCSE received two similar requests for help within two days—one from Morgan Hill, California (not far from Silicon Valley), and one from Albuquerque, New Mexico. In each case, children had been sent home with forms notifying parents that the children would be attending creationist presentations. In each case, the assembly was scheduled to occur the day after NCSE was contacted. In each case, thanks to the work of local activists, the presentation was cancelled.

While this kind of swift effectiveness is heartening, the “story behind the story” is one of more work, before and after the pivotal incident. In Albuquerque, several scientists and concerned citizens had already formed an organization, New Mexicans for Science and Reason (NMSR), dedicated to promoting good science education and public understanding of science. While considering a number of ways to help local schools, NMSR anticipated the possibility that some attempt would be made to introduce creationism, and contacted NCSE months before the problem occurred. When a concerned parent told Mark Boslough of NMSR about the assembly, he visited the school and explained why the presentation was poor science, then contacted NCSE. NCSE

faxed legal information to Boslough, who hand-delivered it to the school. When the principal had more complete information in hand, she cancelled the assembly.

This was not the first known instance of creationism in New Mexico's schools. In an incident publicized throughout the state in February, 1995, a substitute teacher showed a creationist videotape in a Santa Fe school. More incidents can be expected, and the NMSR know their job isn't over. They are continuing their plans to volunteer in local schools, and drafting a statement opposing creationism.

Dale Morejon, a science teacher in the neighboring community of Gilroy, California, called NCSE about the Morgan Hill assembly. He had heard about NCSE some months before from another teacher who had attended a workshop conducted by Dr. Scott. He had been approached in the past by parents who wanted him to teach “creation science” in his middle school science class, but this time, when he explained why teaching creationism is inappropriate, the parent replied, “But they teach it in Morgan Hill.” Morejon learned that a local minister had given a “creation science” presentation to one science class last year, and this year an assembly was planned for all science students.

NCSE faxed information to Morejon explaining why the proposed assembly was illegal, and he, in turn, showed it to the teacher and principal at the neighboring school. Meanwhile, in the short time available, NCSE staff quickly notified some Morgan Hill members, and they, too,

called the school to express their concern. The teacher decided to cancel the assembly but, as in Albuquerque, that's not the end of the story.

An article in the local newspaper reported that some parents were disappointed that the assembly had been cancelled, and that the school district's superintendent said that he would not have told the teacher to cancel the assembly. NCSE has written to the superintendent, explaining why the teacher's decision was right. One of NCSE's members in Morgan Hill is submitting an editorial to the local newspaper, and others are continuing to work on building a support network among area science teachers.

NCSE's staff and local activists make good teams: NCSE has the information people can use in a wide range of situations, but we are most effective when members tell us what's happening in their communities and do much of the work “on the front lines.” Often, NCSE acts locally by identifying potential allies for those interested in resisting creationist assaults on the curriculum. In many cases, these allies were not aware of the interest and involvement of others in their community until after they have called NCSE. For example, when an administrator in a mid-western school district asked us for help because local creationists opposed a very good new biology curriculum, we gave him the name of a local scientist whom he already knew, but hadn't thought of asking for help.

These incidents also remind us that when it comes to creationism,

ONE DAY continued on next page

SPREADING THE WORD ABOUT NCSE

Bret A. Corum

Remember when you first learned about NCSE? I do! Dr. Eugenie Scott defended evolution as a guest on a creationist's TV show, and she did an outstanding job. I have been an avid supporter of NCSE ever since. NCSE helps us all to defend good teachers who have been demonized for teaching modern biology and to thwart stealth candidates who take over school boards to add "scientific" creationism to the curriculum. There are still concerned citizens in your area who haven't heard about NCSE, so help spread the word.

One way to get the word out is through cable television "community bulletin boards." Cable companies often broadcast brief advertisements and public announcements on one of their channels. This service is typically free for non-profit organizations like NCSE, so call your cable provider and request a message form. Be sure to request the form for *non-profit* organizations, since it may differ from those for *commercial* advertisement. Some cable companies post messages for local non-profits only, so note any restrictions on the broadcast agreement.

Eugenie Scott and Molleen Matsumura were quick to provide material to help me compose a brief message. Messages should reflect well on the NCSE, and explain its goals very concisely. Here is a suggested message for broadcast:

Join the fight against "Scientific" Creationism! The National Cen-

ter for Science Education promotes & defends the integrity of science in public schools. Call 1-800-290-6006.

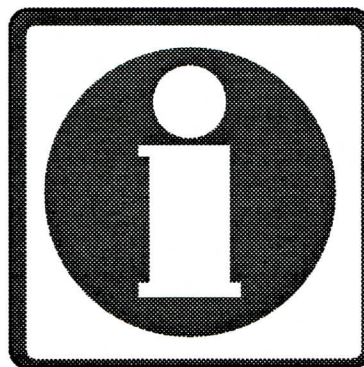
Please ask for NCSE's assistance if you plan to submit a different message for broadcast.

Dr. Scott stressed that NCSE's chief concern is to support the teaching of evolution *within* the science curriculum and to present science as a way of knowing the world around us. Furthermore, NCSE is religiously neutral. Privately held religious tenets are beyond the purview of NCSE. Instead, our concern is with so-called "scientific" creationism in all its guises (e.g. "Intelligent Design Theory," spurious evidence against evolution, etc.), and its imposition into public institutions, especially public-school science classes.

If there is no cable provider in your town, you can always order a few flyers from NCSE, and post them at public bulletin boards in grocery stores, businesses, libraries and museums. If you discuss evolution and creationism online and cite any materials available

from NCSE, please be sure to include NCSE's address. Finally, if you have more ideas to help spread the word, let us know.

[Ed. You should cc: your email on this issue to ncse@crl.com or www.natcensci.org and refer people to the NCSE Web Page. Be sure to ask permission from the original sender for any message that you forward in its entirety.] ■



One Day continued

"It can happen here." Albuquerque is a community with a university and "high tech" facilities like Sandia Labs; many residents of Morgan Hill commute to work the city of San Jose or in businesses in "Silicon Valley." But other factors are at work in these diverse communities, including the hope that "teaching both

sides" will prevent controversy. Until scientific literacy is genuinely widespread, pseudoscience can crop up *anywhere*.

Special thanks to Mark Boslough in Albuquerque, and Ray Gipson and Jack Penketham in Morgan Hill. ■

Phillip Johnson and the Philosophy of Science

Frank J. Sonleitner
Department of Zoology,
University of Oklahoma

Phillip E. Johnson, in his recent book, *Darwin on Trial*, in various book reviews (that are eagerly reprinted by the Creation Research Society Quarterly) and most recently in the latest issue of *C³*, the newsletter of the California Committees of Correspondence, claims that evolution, if not all of science, is based on the philosophy "philosophical naturalism" which is a doctrine "that nature is a permanently closed system of material causes and effects, which can never be influenced by anything outside the system—such as a supernatural creator." He further claims that this is the official philosophy of the educational elite and of the government and that they are trying to indoctrinate the public with this view.

As a scientist myself, I was quite surprised to learn that I am supposed to believe this philosophy; I suspect that most other scientific researchers and science educators might feel the same way. My own graduate training (at the University of Chicago) and my subsequent experiences at four other major universities would indicate that scientists receive little or no formal training in the "scientific method" and certainly no indoctrination into any specific "philosophy of science." They learn how to do science as apprentices in the labs of their major professors in the course of their graduate training. Theocharis and Psimopoulos (1987) corroborate my experience.

Approaching the question from a different direction, Margenau and Varghese (1992) report the views of 60 prominent scientists (including over 20 Nobel Prize winners), almost all of whom accept the findings of modern science concerning the Big Bang, evolution, etc. and yet hold theistic views and think that science and religion are complementary ways of looking at reality.

If the great majority of scientists have had no formal philosophical training and are ignorant of philosophies such as Johnson's "philosophical naturalism," what does guide their research efforts and why do they reject the supernatural? The long term goal of science is to *explain* and understand as much as possible about the universe in which we live. Thus science is interested in us-

based on someone's wishful thinking.

Scientists reject supernatural hypotheses, not because they worship the doctrine of "philosophical naturalism" but because the supernatural hypotheses do not contribute anything to the overall goal of science. In fact they hinder progress towards that goal—of understanding the universe!

Why this should be so results from the nature of the supernatural. Whatever religious and/or magical connotations the supernatural may imply, its basic operational nature is that it is beyond human understanding (Bassinger and Bassinger, 1978). Thus the term "supernatural explanation" is the ultimate oxymoron. To say that something is supernatural is to say that it cannot be explained or understood! It does not provide understanding; it only establishes an absolute mystery. The logically consistent term would be "supernatural mystery." For a scientist to incorporate a supernatural element into an hypothesis is to give up the goal of science and the challenge of attaining it, and instead proclaim that a particular phenomenon is beyond human understanding. To invoke a supernatural mechanism is to attempt to forever establish one's ignorance.

Philosophers have always attempted to heap metaphysical burdens upon scientists. But science is basically a pragmatic endeavor; scientists are guided by general assumptions that are held not on faith, but because they

▼

**"Scientists reject
supernatural
hypotheses . . .
overall goal of
science."**

▲

able and meaningful knowledge. Scientists pursue their goal by *formulating* and testing hypotheses about possible general laws and theories. The only necessary requirement for a scientific hypothesis is that it be testable. This is the only way we know of to gain confidence that an hypothesis really corresponds to the way the universe works and is not just

work. The basic aim of science, stated above, is probably rooted in the innate curiosity of humans, and attempts to find explanations are a challenge to the human intellect. The basic ideas that nature operates in a regular fashion governed by principles understandable to humans are not metaphysical assumptions taken on faith. They are themselves testable hypotheses!

That there is a uniformity in the universe that can be expressed in terms of general laws was apparent to the ancients and even neolithic man in the regularities of astronomical phenomena. Astronomy served as a model for the other sciences. When Newton proposed the universal law of gravity, he demonstrated that the lawful nature of the skies ex-

tended to the earthly phenomena. The idea that the laws of nature could be explained in terms of general theories gained acceptance in the nineteenth century with the successful theories of physics and chemistry. Science is a positive effort; it has to deliver the goods; its hypotheses must be tested and shown to work. As long as they meet those criteria, they are accepted as true.

Finally, Johnson complains that science doesn't give the creator anything important to do. But setting off a Big Bang filled with matter having the appropriate properties so that after 15 billion years it develops into the marvelous and complex universe in which we live is no mean feat! It makes the flashy Old Testament miracles (the burning bush, pillar

of fire, etc.) look puny by comparison.

References:

Bassinger, D. and R. Bassinger. 1978. Science and the concept of a miracle. *Journal of the American Scientific Affiliate* 30(4): 164-168.

Margenau, H. and R. A. Varghese. 1992. *Cosmos, Bios, Theos . . . Scientist Reflect on Science, God and the Origins of the Universe, Life and Homo Sapiens*. Open Court, La Salle, Illinois. xiv + 285 pp. ISBN 0-8126-9186-5.

Theocharis, T. and M. Psimopoulos. 1987. Where science has gone wrong. *Nature* 329: 595-598. ■



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"SQUASHED SPIDER" in the (World Wide) Web

Molleen Matsumura

"Squashed spider," the affectionate nickname NCSE staff use for our stylized DNA logo, seems especially appropriate now that NCSE has a site on the World Wide Web, the Internet's graphically based information network. The NCSE "home page" will be a new way to reach potential new members, and one more way to serve all our members.

As accomplished Netnauts (and NCSE has many!) already know, the World Wide Web (WWW) is the most sophisticated system for linking related information on the Internet. Anyone who has an information site on the WWW can establish links to other sites. NCSE can now offer a wider range of information by establishing links to other sites. Furthermore, people interested in better science education can discover NCSE while "browsing the Web." NCSE is already applying to be listed in various Web directories, which will be a bit like being listed in a library's card catalog. Being linked to other sites will make NCSE more visible in much the same way that a book might be discovered by someone who is browsing among books on related topics on a library shelf.

Where to Look and What You'll Find

The URL for this site, unlike all too many, is short and easy to remember—not much longer than our new domain name [see "Domain Name," p. 21]; add to your bookmark list <http://www.NatCenSciEd.org>

▼
[HTTP://WWW.
NatCenSciEd.org](http://www.NatCenSciEd.org)
▲

[Ed. We capitalize the NCSE in the domain name as a way of making them stand out and easier to remember, however most web software is not case sensitive at this level in the domain, so the capitals are not required. However, if you should have difficulty with the address, be sure to check to see whether your software discriminates between upper and lower case letters in domain names and addresses.]

Information at the site will be continually updated. This "first edition" includes texts of several NCSE pamphlets, and more will be added in the near future. They are handy reference sources for users who are speaking or writing about the issues, and on-line previewing can help you decide which printed materials to order. One feature that will be especially useful for some members is a link to the Alamo car rental service Web-site; you can use the service online with the group discount number on your card. In future "editions," we'll add selected articles from back issues of *NCSE Reports* and *Creation/Evolution*. We will also include links to a number of on-line resources covering related areas of interest, such as research about evolutionary biology and information about civil liberties organizations.

The area titled "Human Evolution Education Network," designed to assist cooperation among K-12 teachers and scien-

tists studying evolutionary biology, should be fun for every member of NCSE. This is where you'll find bibliographies of the best books about evolution, and links to on-line museum exhibits like the Life Over Time exhibit at Chicago's Field Museum of Natural History.

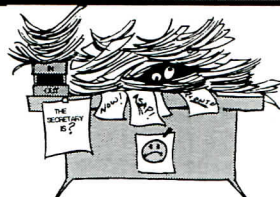
Can You Help? Yes!

The more opportunities people have to discover this Website, the more effective it will be. You can spread the word, or help make the NCSE site an interesting place to visit:

- If you have a home page of your own, add a link to <http://www.NatCenSciEd.org>
- Announce the opening of our WWW site in newsletters you edit, on-line or in print, or send the news to the newsletter editor.
- Send us your suggestions of WWW sites to which NCSE could establish links—sites with information about evolution or about science education; write to WWW@NatCenSciEd.org
- Send your suggestion for inclusion in one of our bibliographies of books about evolution, suggested for use in K-12 classrooms and even college introductory courses. Every suggestion should include author(s), title, date of publication, name of the publisher, and a sentence or two telling something about the book, the appropriate audience

SQUASHED continued on next page

NCSE Acquires "Domain Name"



Molleen Matsumura

Good news for NCSE members!! Our acquisition of an Internet *domain name* will make it even easier to communicate with NCSE by email. A domain name is an electronic address that doesn't change even if the user changes services; it's like a post office box address that doesn't change even when you move to a new street address. The domain name also covers a set of addresses, so that you can direct your email to just the right

SQUASHED continued

(for example "general readers" or "kindergarten-third grade"), and why you recommend it.

—If you are a teacher, and willing to be named as a contributor, please tell us your name, the grade you teach, and name of the state in which you teach; your contribution will be listed in the "Teacher Tested" bibliography.

—If you are a scientist who wishes to be named as a contributor, please tell us your name and institutional affiliation.

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Special thanks are due Yves Barbero for designing and installing the NCSE Web page, and to "The Sphere" for hosting the site. Thanks, also, to Frank L. Fire, Richard Trott, and Mark Ivan Vuletic, for offering to prepare additional materials to be posted at the site, and John R. Cole, Leslie Chan, and Yves Barbero for suggesting links. ■

About Your Subscription

We are sure you have noticed that our publications have been delayed in the last half of 1995. This is volume 15(4), the Winter, 1995 issue of *NCSE Reports*. Here are the publications that you can expect to receive from NCSE in the next few months.

If your expiration date was December, 1995, you should have seen a "last issue" on your mailing label, and your subscription includes this issue and *Creation/Evolution* number 37.

If your expiration date is March, 1996, you should expect *NCSE Reports* 16(1) and *Creation/Evolution* number 38.

If your expiration date is June, 1996, you should expect *NCSE Reports* 16(1) and 16(2) and *Creation/Evolution* number 38.

—Erik Wheaton

Teachers Comment

[These comments on NBC's *Mysterious Origins of Man* were sent to NCSE by Craig Nelson at Indiana University who directs a project that is concerned with science teaching in the public schools. One important issue that these teachers raise repeatedly is the usefulness of "bad" exemplar as a tool for teaching how science ought to be conducted.]

I watched the show last night. It was one of the worst things that I've ever seen. (And I've been to creationist "rallies" just so that I know what I'm up against in class). Almost all creationists have conceded that the human footprints in Paluxy are eroded dinosaur tracks. And the idea that Lucy can't be a missing link because some scientists say she was more like an ape and some say she was more like a human—what more do they want? She has traits of both like a true mosaic! I could go on and on.

Karen Mesmer
Baraboo, WI.

If any of you saw this [program], you have my sympathy. On the other hand, I suspect a lot of your kids who saw it (not to mention the general public) will probably be totally impressed by the show, or (hopefully) at least confused. It would be helpful if we could share info to shed light on the "strange findings" and "the only likely explanations for them," so we could point these out to our kids, and help them to recognize crackpottery when they see it, without coming across as simply defensive about science in general, and human evolution in particular. The whole program looked like a von Daniken revival! I would say we should send notes of protest to NBC, but the damage has already been done. I have some materials and information about DuBois' Java Man

situation, the Paluxy human footprints with dinosaur tracks, Stonehenge, and few others (mostly from *Skeptical Inquirer* and *Creation/Evolution*). But I'd like to hear about the following: 1. metallic "man-made" spheres from South Africa, 2.8 billion years old (?); 2. fossilized finger (with bone? inside) from Paluxy, Texas; 3. "perfect" human footprint from Paluxy (I thought this was all laid to rest some years ago, even to the embarrassment of creationists); 4. explanation of warm-weather plants in the stomachs of frozen mammoths (I saw something on this in *Discover*, I think, sometime in the past few years, but don't remember when).

Larry Flammers
San Jose, CA

This program has caused me no end of problems today. I too, have had to deal with questions about Lucy and human and dinosaur footprints all day, but the capper was when a biology teacher came and proudly announced to me that humans and dinosaurs have now been shown to live at the same time. . . . After today, I wonder if we should use this video in our SENSIs as a tool.

Mike McNabb,
Louisville, KY

I saw the program, too. . . . Like you, I thought the Paluxy footprints claim had been put to rest

several years ago. Laurie Godfrey has done some writing on this matter and *Creation/Evolution* has had more than one piece on it. I have never heard of the fossilized finger before, either. . . . One question you didn't raise was the observation by the British gentleman that occasional African fossils are found that are claimed to be the "missing link" but are later claimed to be either ape or human. This is emphatically mistaken. The whole point of some of those fossils is that they are neither ape nor human but show a mixture of both. The fellow must not read the same journals and books that the rest of us do.

I particularly resented the claim by one of the two American authors of [*Forbidden Archeology*] they cited who claimed that he had been at a meeting of anthropologists and some of them claimed that Lucy was merely a monkey! I have never in my life heard anybody but anti-evolutionists make such a ridiculous claim.

For a while, I thought the program was going to end up advocating creationism, but later it seemed to be a rehash of von Daniken. How useful do you think this program would be as a teaching tool?

Martin Nickels
Illinois State University

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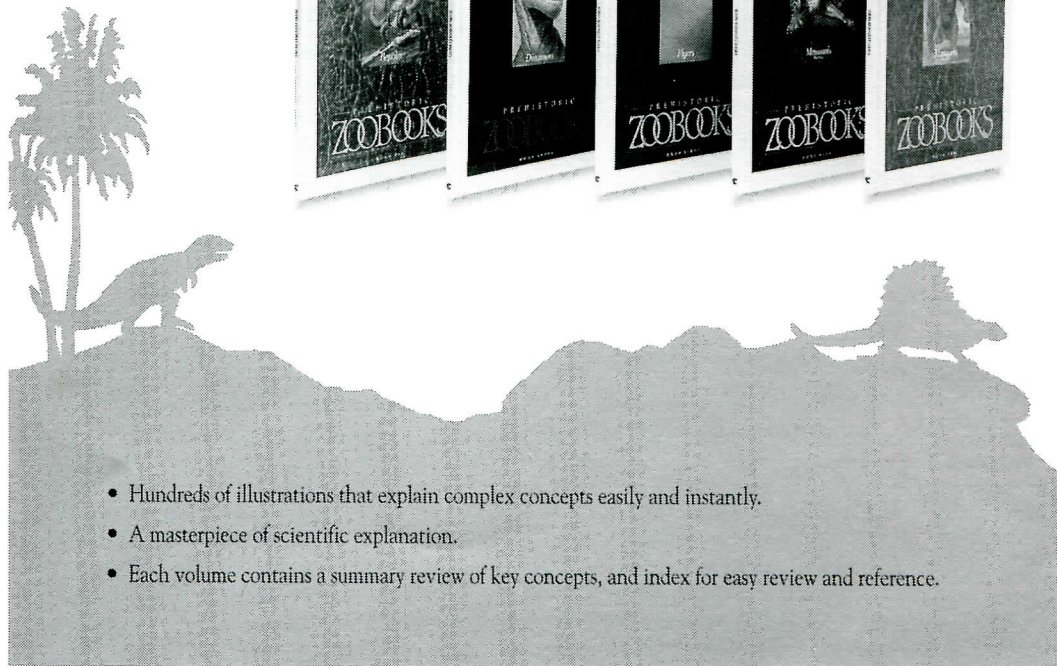
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