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The California Science Framework: A Victory for Scientific Integrity

Kevin Padian

Every seven years California revises its Science Framework, a document that prescribes how science is to be taught in public schools. On November 9, the California State Board of Education (SBE) voted unanimously to accept a Science Framework developed by a committee of 16 scientists and educators. These guidelines had been backed by Bill Honig, State Superintendent of Public Instruction, and the state's Curriculum Commission had already unanimously approved them after months of review by hundreds of educators and scientists.

As usual with documents devoted to science education, the religious right applied pressure to downplay or eliminate the treatment of evolution, and the scientific and educational communities were united in support of evolution. Curiously, both sides claimed victory after the board vote, largely because of reports that at the last minute the language had been softened to accommodate the religious right. The media were tremendously confused, and the perceptions people around the country have of the matter depend almost entirely on the local news' story. There were indeed some last-minute concessions, but the good news is that the Science Framework stands as the strongest document of its kind ever in force.

The media confusion is understandable. Discussion of the 187-page document focused on two pages of the final draft submitted to the SBE. Those two pages discuss how socially controversial topics—such as evolution, animal rights, and conservation—are to be handled by science teachers. In accordance with board policy adopted last January, such topics should not be avoided. Discussion should center on the scientific issues, and teachers should show how a knowledge of science should be essential to deciding public issues involving scientific questions. Individual religious and philosophical beliefs should be respected, but questions not appropriate to the science classroom should be referred to family and clergy. Such beliefs must not be used to discourage full and open discussion of scientific issues. The goal of education is not indoctrination, but understanding.

In June, the Board sent a letter to the Curriculum Commission, which was then considering the Framework. Two points are of interest here. The Board's first point was that the statement "indicating that evolution is a fact and a theory is inconsistent with the Board's policy and should be corrected wherever it appears in the document." Evolution, like gravity and electricity, is both a fact and a theory, as any scientist knows. The same term conveys both the observation that evolution has occurred and the theoretical structure that explains those observations. A theory, in scientific parlance, is much more robust than a fact, but some board members seem unable to understand this, despite repeated explanations. Some of the impetus for this comment undoubtedly came from creationists.

see Framework, p. 10

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NUCLEUS

New NCSE Supporters

We are pleased to welcome three new scientists to our list of supporters.

Dr. James D. Ebert is the Director of the Chesapeake Bay Institute and Professor of Biology at the Johns Hopkins University at Baltimore. His distinguished career as an embryologist and administrator has included tenures at Johns Hopkins, MIT, and Indiana University. He was Chairman of the Department of Embryology at the Carnegie Institute of Washington from 1956 to 1976 and President of the Institute from 1978 to 1987. He is a member of the National Academy of Sciences, Institute of Medicine, and the American Philosophical Society, and he currently serves as Vice President of the National Academy of Sciences. Dr. Ebert's advice is sought frequently, and he has served on numerous advisory committees of the National Institutes of Health and other scientific institutions, as well as chaired or served on National Research council committees. He was the Chairman of the committee that prepared the booklet, *Sciences and Creationism: A View from the National Academy of Sciences*, which was distributed nationwide in two editions numbering more than 140,000 copies.

Dr. Donald F. Hornig is Professor of Chemistry and Director of Interdisciplinary Programs in Health at the Harvard University School of Public Health in Boston. His scientific interests have spanned physics, chemistry, and health matters. He was President of Brown University from 1970 to 1976, and he was Director of the Office of Science and Technology Policy during President Johnson's Administration from 1964 to 1969. Dr. Hornig has been awarded over 15 honorary degrees, as well as numerous coveted prizes. He is a member of the National Academy of Sciences, the American Philosophical Society, and the American Academy of Arts and Sciences.

Dr. Joseph E. (Ed) Rall is the Deputy Director for Intramural Research at the National Institutes of Health. He holds MD and Ph.D. degrees, and his research has spanned both basic and clinical science studies in endocrin-

ology. From 1962 to 1983 he was Director for Intramural Research of the National Institute for Arthritis, Diabetes, Digestive, and Kidney Diseases. Dr. Rall also has extensive experience in studies of radiation effects. He is a member of the National Academy of Sciences, as well as professional societies in his

"After Aguiard" to be NCSE Annual Symposium Theme in New Orleans

This year, the NCSE annual symposium will be held with the AAAS in New Orleans. Our theme will be "After Aguiard: Creationism Continues." (The 1987 Supreme Court decision *Edwards v. Aguiard* declared Louisiana's bill requiring the teaching of "scientific" creationism when evolution was taught an unconstitutional establishment of religion.) Four speakers will look at different aspects of the creation/evolution controversy from different perspectives. Michael Hudson, the Western Regional Director of People for the American Way, will speak on "Creation Politics." Rev. James Wood, Baptist minister and Baylor University professor at the Institute of Church-State Separation, will speak on "Church-State Relations After Aguiard." Gary Crawford, a lawyer involved in the Arkansas *McLean* case, will discuss "Legal Issues." NCSE Executive Director Eugenie C. Scott will discuss "Old Wine in New Bottles: Creationist Strategy Post- Aguiard."

The AAAS meets February 15-20. The NCSE symposium will be held on Saturday, February 17, from 2:00-5:30, in the Mississippi A ballroom of the Holiday Inn-Crown Plaza hotel in New Orleans. Admission is free, and all are invited. A brief business meeting will be held at 5:30, and at 6:00, the NCSE cash bar will provide an opportunity to meet informally with other NCSE and CC members, as well as the speakers. Our special guests will be plaintiffs from the *Aguiard* case. Try to attend! We will try to have tapes available for purchase after the meetings, but there is no substitute for attendance!

Erratum

Several readers noticed a mathematical error in "Creationist Mathematics" in *NCSE Reports* 9(4). A hand breadth would be about 4½" to 5", not 10" as stated, so the thickness of the "molten sea" in Kings 7:26 is consistent. But no one in their right mind would compare an outside diameter to an inside circumference.

NCSE Receives Foundation Support

NCSE is pleased to announce the receipt of two foundation grants for 1989 and 1990. The Richard Lounsbery Foundation awarded us \$33,000 to support the Resource Center, the Human Evolution Slide-Video Project, and Publications, including the production of *Voices for Evolution* (see p.12). We are also grateful to the Esther A. and Joseph Klingenstein Fund for an unrestricted grant of \$20,000.

Reminder: December 31 Approaches!

NCSE is grateful for our increase in membership, for foundation support, and for member donations. There is so much to be done to combat the sectarian threat to education, and to promote evolution education and education in the nature of science, and to do so takes time, people, and money. The more of each that we have, the more we can do to improve science education. If you would like to make a tax-deductible donation to NCSE during 1989, may we remind you to write your check before December 31? It may make a difference to you in April, and it will certainly make a difference to us! Have a happy holiday season!

Submissions

NCSE Reports needs articles and reports, especially on local stories involving evolution education, CCs, or creationist activities. Articles should be submitted *double-spaced*, typed on one side of the paper, and have inch margins all around. Computer users, please use a *nonproportional* 10 or 12 pitch font (such as Courier, Elite, or Pica). If possible, please include a 360K 5¼" IBM-compatible diskette with the text in WordPerfect, Microsoft® Word, old-fashioned WordStar® (version 3.3 or earlier), or ASCII.

Submissions will not be returned unless accompanied by a stamped, self-addressed envelope. Send submissions to:

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Theories, Laws, and All That

I should like to comment on a letter that appeared in a previous issue:

Parish, in a letter (*C/EN* 8(6):20) commenting on the article by Lerner and Bennetta, "The Treatment of Theory in Textbooks" (*C/EN* 8(5):3-7), mentions the "old hierarchical concept of hypothesis (working question), theory (half-proven), law (inviolable truth). The hierarchical series seems hard to root out, possibly since most physical scientists still seem to subscribe to it."

Contrary to Parish' comments, all of my physical science and philosophy of science books point out that in the physical sciences there is a precise distinction between law and theory. Laws are generalizations about phenomena while theories are explanations of phenomena. A theory postulates a mechanism that cannot be directly observed and must be tested indirectly against predictions made about observable phenomena. In one sense, theories are more "ultimate" than laws because they predict and explain laws. For example, the kinetic theory of heat predicts and explains the second law of thermodynamics; the theory of general relativity predicts and explains the law of gravity. The second law of thermodynamics was never a theory, and the theory of relativity will never become a law. Theory and law are qualitatively different in what they are and what they do. They are not distinguished by their degree of verification. This distinction can also be made in biology. Biology, however, deals with much more complex systems than does physics. As a consequence, its generalizations and explanations have far more qualifications and exceptions and rarely are given the titles of law and theory.

I have no idea of the historical origin of this "inductive hierarchy" as mentioned by Parish. It, however, has been reported in high school texts (*Bookwatch Reviews* 2(4):2). It also appears in some college biology texts. I briefly consulted 27 modern, college-level biology texts to see how they treated the distinction between law and theory (a list of these is available on request). Almost all included some discussion of "the scientific

LETTERS

method" near the beginning. Six made no mention of law or theory. Twenty-one stated that after extensive verification, hypotheses became theories. Twelve of these drew attention to the different usage of the term theory in science and everyday life. Seven of these stated that, upon further verification, theories may become laws—the hierarchy mentioned by Parish. Four others state that under those circumstances, theories become principles; the term *principle* being either undefined or vaguely synonymous with law. And one textbook states that theories become scientific "facts."

Exactly what was implied by the word *facts* being enclosed in quotation marks was not made clear. (Another book uses only the word "law" in quotes.) The remaining six books made no mention of law or theory. Despite the fact that 20 of the books do not define law and 6 do not discuss theory either, all use these terms in contexts such as theory of evolution, Mendel's laws, and so forth.

Only one book distinguished between generalizing and explanatory hypotheses, which are the precursors for laws and theories respectively, but it then goes on to state that theories become laws after further testing! In several texts, I also found other incorrect and confusing statements to the effect that the distinction between hypothesis and theory is quite arbitrary and that the terms *law* and *theory* are used interchangeably. One book that preferred the term *principle* stated "...the term law sounds so absolute that it may discourage challenge, and as a result, most scientists prefer the designation principle." Indeed! As a scientist, I have yet to notice a ground swell of opinion in favor of such terms as the Principle of Gravity or the Second Principle of Thermodynamics. To create further potential for confusion, another book defines *principle* as a basic assumption of science (causality, uniformitarianism, and so forth). Overall, although the discussions of scientific method in these college texts are better than those found by Lerner and Bennetta in high school texts, they omit many important points. None, for example, mentioned the other main

function of theories—that of suggesting and guiding future research—and they contradict each other on other points, such as the difference between law and theory. There is definitely much room for improvement in this area!

Frank J. Sonleitner

Cosmology at West Point

In the catalog of the U.S. Military Academy at West Point, there is a course called *cosmology*. The course description reads as follows:

PY 374 COSMOLOGY

Attempts to combine metaphysical speculation and scientific evidence into a unified theory of the universe. Students will consider a variety of mythological, religious and scientific explanations for the universe (considered as a collection of natural phenomena).

This is *not* modern cosmology. Modern cosmology deals with the physics of the development of the universe from the Big Bang to the present and extrapolates into the future. Religious and mythological explanations have no place in modern cosmology. In fairness, metaphysics does, however, in consideration of the role of the sentient observer in quantum physics (the "Schroedinger's Cat" paradox, for example) and the anthropic argument. Nonetheless, the course description does not sound like one based on a text of modern cosmology, such as Kutter's *Origin and Evolution of the Universe*, Silk's *The Big Bang*, Weinberg's more formal *Gravitation and Cosmology*, or P.J.E. Peeble's *Physical Universe*.

Has any NCSE Reports reader taken this course?

Francis Graham

To Debate or Not to Debate

I am a little disturbed about the Massachusetts debate flap. I realize that no matter where a debate is held—college campus or church, it really is not a debate, but a vehicle for Gish to promote what is essentially a religious message. And the true believers know this—they don't come to hear about science. In fact, that's how I propose to begin my spiel. But I think we have to be careful about how we think through the debate proposition. I feel that Gish should never be allowed to appear unopposed on a college campus, even if the meeting is sponsored by a Student Christian Fellowship. If Gish speaks unopposed, that gives him an opportunity to say that "evolutionists" are afraid to face him. We can't afford to let him get away with that. Debating in a church before an audience consisting largely of true believers is somewhat different. But remember, Ken Miller debated both Gish and Morris in churches in Florida, and he did quite well by his own account. Even at a meeting in a church in a small town it is possible that a reporter from the local press might show up—they are always looking for stories. And if we don't show up, our side of the story will not be presented. In cities, it is another matter. Most media people think creationists are a bunch of "nuts," and they won't waste their time reporting on their activities.

So I reluctantly conclude that those of us who feel we can do well, should participate in debates when we think the situation warrants. I am skeptical why someone such as Sarich chooses to put himself essentially in this position of a "straight man" for Gish, as I think he does when he debates Gish so many times. Other debaters have not done that.

Emanuel I. Sillman

Science Textbook Adoptions in Alabama: Part I

Scott Brande

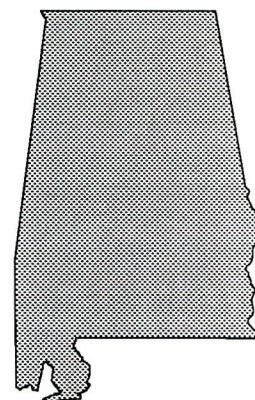
Alabama has just witnessed its most serious challenge to the integrity of science education since 1977. The State Textbook Committee voted on October 2, 1989 not to consider *Of Pandas and People* a textbook submitted by Houghton Publishing (Dallas, Texas) for inclusion on the recommended list for science text adoptions. One committee member, quoted in a newspaper interview, remarked that *Pandas* "is a strictly religious book."

Unlike some states, Alabama reviews only one or two subjects each year. Consequently, science books, once adopted, remain so for a period of six years. The long interval between adoptions means that successful submission is a must for publishers desiring a presence in the Alabama textbook market. Houghton Publishing submitted the title (*not* the book) to the Alabama Department of Education earlier this year for consideration as a science text. And there hangs a tale.

The State Textbook Committee scheduled the public hearing for September 12. To prepare for the hearing, I obtained in late August a list of science books submitted to the Department of Education. I then visited the University of Alabama at Birmingham (UAB) library, one of 22 libraries across the state designated for the public display of all submitted books.

Having served as vice-president of the 1983 State Textbook Committee, I heard during its public hearing the usual arguments by members of Eagle Forum and other citizens on the supposed "dogmatism" of evolution. Perhaps because of the successful passage of the 1981 balanced-treatment

CC UPDATE



Of Pandas and People, a textbook promoting "intelligent design theory" as an alternative to evolution, was submitted for adoption in Alabama recently.

Good News from Idaho!

The creationist supplemental textbook in biology, *Of Pandas and People*, was submitted for adoption in the state of Idaho. We have learned that the Textbook Committee, at its meeting on November 27, rejected *Pandas* by a lopsided majority. Idaho CC liaison Garvin Chastain and the NCSE office provided information to the Committee to help them in their decision, and we commend them for their discernment.

NCSE will provide our promised extensive review of *Of Pandas and People* in our next issue. The article was omitted due to space limitations this month. If the book appears in your district and you want reviews by scientists and educators, call NCSE. We are here to help.

legislation in Arkansas, these individuals also argued for the inclusion of creation "science" into the Alabama science curriculum. In 1983, these appeals for creation "science" could not have been satisfied, even if that were the recommendation of the Textbook Committee (it was not) or the decision of the State Board of Education. Not one of the science books submitted in 1983 included any substantive discussion of the topic.

Evolution and the fossil record are normally the foci of attacks by those espousing creation "science," so I limited my reviews to appropriate sections of the life science, earth science, and biology texts. Checking the display copies against the submission list, I found it odd that a few books were missing. With the public hearing a few days away, I had no time to investigate the missing texts.

As the first speaker at the September public hearing of the 1989 State Textbook Committee, I emphasized that the average book was better than its 1983 edition. In my opinion, few books exhibited poor treatments of life science, earth science, or biology. I also pointed out some errors of fact and recommended that one biology book be denied a place on the adoption list.

None of the books I reviewed provided coverage of creation "science," so I thought the remarks of opponents of evolution would be similar to those I heard in 1983. Imagine my shock when Joan Kendall, director of the Birmingham chapter of Eagle Forum, praised *Pandas* as an exemplary scientific text presenting an alternative to modern evolutionary theory. Mrs. Kendall said "intelligent design" is the basis of the alternative.

I could not believe I had missed such a critical text. Upon returning to Birmingham, I immediately checked with Gordon Dunkin, the UAB librarian who received the submitted texts. He confirmed that Sterne Library had never received *Pandas*. Was there a deadline for receipt and display of these texts by the designated libraries? Gordon extracted from his file a June 16 letter from Barry Buford of the State Department of Education

instructing him to ensure that all submitted texts were on display by July 10.

Pandas was now nearly 3 months late to the UAB library! Because I wanted to review this text, I called every one of the other 21 designated libraries across the state. Not one of them had a copy of *Pandas*. The absence of the book from the designated libraries raised a serious question: If a book were not on public display as required by the Alabama Department of Education, could it be voted on legitimately by either the State Textbook Committee or the State Board of Education?

I completed my survey about two weeks prior to October 2, the date on which the State Textbook Committee was to vote on its recommendations for adoption. During this interval, I obtained a copy of *Pandas* from Eugenie Scott, Executive Director of NCSE. Upon reading the text, I realized that this book was potentially much more damaging to the integrity of science education than I had expected. I sent a detailed criticism to each member of the State Textbook Committee just three days prior to their vote. I argued that *Pandas* should be eliminated from consideration because of the lack of public review.

After my discovery that *Pandas* was unavailable for public review before the September 12 Textbook Committee hearing, Houghton Publishing sent bound copies to each library by Federal Express. They arrived on September 29, one business day before the committee's vote.

The Textbook Committee meetings are open, but I could not attend the October 2 session. I later learned from a newspaper reporter who attended the meeting that *Pandas* elicited extensive dialogue among the committee members about its suitability as a primary or supplemental biology text.

Pandas does not cover basic biology. It addresses only problems of life's origin and evolution through the comparison of "intelligent design" and modern evolutionary theory; therefore, the authors explicitly declare it to be supplemental to major biology texts.

Perhaps for that reason a majority of the State Textbook Committee voted not to consider *Pandas* as a primary biology text. The book was also voted down as a supplemental text, at least in part because of its thinly disguised religious underpinnings.

I believe the science adoption in Alabama of *Pandas* would damage the integrity of our science curriculum and set a dangerous precedent for science textbook adoptions in other states. I am currently working to publicize this book and its nonscientific views to scientists throughout the state.

The State Textbook Committee's votes are only advisory to the State Board of Education, so it is possible for the board to reconsider this book at its December 14 meeting, when the votes for adoption will be taken.

Stay tuned for the final count.

"Darwin Lovers" at St. Louis Zoo May Face Problems

Missouri CC liaison Ranse Traxler reports that only one school district in the St. Louis area passed a school bond referendum during the November elections. Additional funding was also denied to the St. Louis Science Center, a public natural history museum/planetarium. The Science Center referendum was to provide additional funding for staffing and operations.

This may bode ill for a special referendum in April to support the St. Louis Zoo, home of the new "Living Darwin" exhibit discussed in *NCSE Reports* 9(4):6. Fundamentalists are attacking the Darwin-containing "Living World" exhibit as being "too evolutionary" and calling for cutting off the zoo's public monies. If citizens in the St. Louis area are already reluctant to fund education and institutions such as the Science Center, a concerted effort on the part of creationists may well tip the balance next spring. We shall keep you posted.

Miscellaneous News

William Thwaites, Russell Doolittle, John R. Cole, and Laurie Godfrey were among those interviewed at length by a video production crew preparing an adult education series for the Missouri Synod Lutheran Church. The video series will be seen by at least 500,000 church members. Missouri Synod Lutherans are "Biblical literalists" who treat the Bible as historically accurate "like a newspaper, not a technical manual," according to Dirk van der Linde, their Director of Education. The church has often seemed uncomfortable associating with the more outlandish claims of scientific creationists.

In his interview, Cole was questioned about why he opposed equal-time policies for the classroom. "Religion is not science," he said, "so when religious claims try to enter the science classroom they should expect resistance. To the scientist, creationism, not evolution is the claim that would require revolutionary evidence to be taken seriously."

The Canadian Broadcasting Corporation's *Quirks and Quarks* broadcast an interview with NCSE President John R. Cole this summer.

During the Framework controversy, NCSE Executive Director Eugenie C. Scott made numerous appearances on radio talk and call-in shows, including KKLA-Hollywood (John Stewart Live), KGIL-Los Angeles, WJN-N. Carolina, and NPR (All Things Considered). NCSE Board member Kevin Padian appeared on KMOX-St. Louis.

New Idaho CC Liaison

The new Committee of Correspondence Liaison for Idaho is Dr. Garvin Chastain, Psychology Department, Boise State University, 1910 University Drive, Boise, ID 83725, phone 208-385-1514. Dr. Chastain has a long-time interest in sectarian pressures on education, and since joining NCSE, he has helped with both local Idaho and national issues.

NEWS

Webster Creationism Lawsuit Decision Appealed

"If a teacher in a public school uses religion and teaches religious beliefs or espouses theories clearly based on religious underpinnings, the principals of the separation of church and state are violated as clearly as if a statute ordered the teacher to teach religious theories such as the statutes in Edwards did."

Thus, did Federal District Court Judge E. Harold Dinger rule earlier this year on a suit by Ray Webster. In March 1988, junior-high teacher Ray Webster sued the New Lenox, Illinois school district and its Superintendent, Alex M. Martino, for "deprivation of rights by censorship contrary to the first and fourteenth amendments...." The Superintendent had told him that he was "not to teach creationist science as the federal courts have held that this is religious advocacy. You may discuss the historical relationship between the church and state, but only in a purely objective manner without advocacy of a Christian viewpoint and only if such discussion is an appropriate part of the standard curriculum."

NCSE has followed this story since its beginning (C/EN 8(2), 8(3)). ICR attorney Wendell Bird has taken the case as a key strategy to follow upon the Supreme Court *Edwards v. Aguillard* decision banning the required teaching of "scientific" creationism. Creationists have interpreted the decision to mean that even if states can't *require* teachers to teach creationism, an *individual* teacher could do so on his/her own. Mr. Webster is their first test case.

Judge Dinger dismissed the case, noting that precedent required a teacher to "teach within the framework of curriculum outlined by the District" and thus, "Webster's rights as a teacher to present certain material within his social studies curriculum is not absolute." The District has no right to enact a curriculum that would "inject religion into the public school setting," and in fact, has the *responsibility* to monitor what is taught to "ensure that the

establishment clause is not violated."

Part of Mr. Webster's amended complaint was a petition by a student, Matthew Dunne, for his "right" to be taught creationism. Judge Dinger noted that Dunne was not being denied his right to hear these ideas, just "limited to receiving information as to creation science to those locations and settings where dissemination does not violate the first amendment." In other words, learn all you want about "scientific" creationism, but do it outside of school.

The conclusion of the decision was particularly strong. Dinger said, "The relevant issue here is what Webster was prohibited from teaching. He was prohibited from teaching creation science. The U.S. Supreme Court has found that creation science is a religiously based theory and that the teaching of this theory in a public school violates the first amendment. Prohibiting this teaching is thus constitutionally valid." This is the strongest statement on the teaching of creationism since the Arkansas *McLean* decision, which defined "scientific" creationism to be without merit scientifically and educationally.

The Webster case is being appealed on procedural grounds. If the decision is upheld, expect Bird to look for a client who is teaching something without the word "creation" in it. Because the Supreme Court has declared that the "theory of creation science" embodies a creator and thus "embodies a religious belief," any form of antievolutionism with "creation" or a similar word in it will be frowned upon by the courts. Bird has already published a book espousing the "theory of abrupt appearance," (see p. 21) and others are promoting the "theory of intelligent design." Webster identified himself as teaching *creationism*, a legal no-no. Bird's next case probably will involve a teacher teaching one of the euphemisms. After all, there is no constitutional provision against teaching bad science, only religion. However, until the Appeals Court rules, *Ray Webster et al v. New Lenox School District* cannot be considered a closed case.

NCSE Reports will keep you informed.

Television Editors Censor Evolution Scene

Ranse Traxler

Because I have a six-year-old son, I have watched the George Lucas's movie *Howard the Duck* several times on HBO. Recently, when it was released for television in edited form, I had a chance to see it again. As usual in such cases, I amused myself by looking for differences in the two versions.

I discovered at least three edited portions. A bathtub scene with a female duck-person, near the beginning of the movie, was changed in the TV version so that the bubble bath froth strategically blocked the camera view of her upper torso. Later, in the scene in which the female lead explores Howard's wallet, her discovery of a condom in it was deleted. The third change, however, was more interesting.

The original scene: Howard, the female lead, and a young museum worker are talking in front of a display on human evolution. Howard, asks, "All I want to know is how I got here."

Worker: "I have a theory." Camera shows display and standard depiction of human evolution, with all stages in sequence from left to right. "Just like humans evolved from ape-like ancestors, you must have evolved from duck-like ancestors." The evolutionary sequence slowly fades from human-like creatures to a duck-man transition, filling Howard with awe. This mood is then broken by a museum director in the distance, yelling to the young man to get back to work.

The edited scene: Immediately after the words, "I have a theory," the museum director yells to the young man to get to work, deleting about half a minute of evolutionary explanation.

It is interesting what TV editors find offensive. In various movies I have seen some things I thought would surely be edited but were televised anyway. TV now permits underwear and string bikinis as the only wardrobe on some shows, all but a few banned words, and enough

shootings to please even the most gung ho NRA member. How can a campy reference to science be worse than Morton Downey or the anti-intellectual bigotry of most televangelists?

Seattle-area Students Protest Creationism

Several hundred students from Bothell and Woodinville High Schools boycotted classes on November 3 to protest the school board candidacies of three fundamentalists. Mary Lynne Sebranke, J. David Kidd, and Charles Young were supported by a local group calling itself, "FACTS for Freedom," whose objective is to elect candidates who "ascribe to the same moral values we do, which are based on the word and laws of God." FACTS also supported three other fundamentalist candidates in a neighboring district, according to an article in the *Seattle Post-Intelligencer* on November 4, 1989.

All three candidates embrace the teaching of "scientific" creationism and support other causes typical of Religious Right candidates. Bothell student Jolene McCracken was quoted as saying, "I don't think that religion should be taught in public schools. Parents should send their kids to private schools if that's what they want them to learn. Teaching creationism shuts out people who don't believe in God." (As well as many who do, Jolene!)

We are pleased to learn from NCSE member Art Schneider that all of the creationists were defeated.

World History Chart Still Spreading

The "World History Chart" based on Mormon theology (*NCSE Reports* 9(2): 18, 9(4):19) made an appearance in October and November in the new national magazine for educators, *Teacher*. The Advertising Manager was unaware of the true nature of the chart and was pleased to have been informed. Any other sightings? Keep NCSE informed!

Framework ...

The authors and editors of the Framework declined to "correct" statements that identified evolution as a fact and a theory. Instead, we added several paragraphs explaining why scientists consider evolution, gravity, and electricity to be both facts (observable, confirmable propositions) and theories (larger, testable bodies of hypothesis and evidence that explain natural phenomena). Indeed, we would have refused point blank to remove references to evolution as fact. Evolution is a scientific fact. Period.

In its second point, the board felt that the discussion of "creation science" or "scientific creationism," presented in the Framework as a body of pseudoscience rejected by both scientific societies and the Supreme Court, was "too defensive and should be modified." Some fundamentalists objected to having these facts brought forth, and some members of the board, including president Francis Laufenberg and UCLA School of Management professor Joseph Carrabino, appear to have capitulated to their pleas. Unfortunately, other board members, who were very supportive of the Framework, did not oppose them. The authors and editors removed one unnecessary sentence but felt that removing more would erode the clarity of the document on this issue and the protection afforded to science teachers.

The Framework provides protection for the public school teacher and plenty of evidence to turn away creationists.

The Curriculum Commission approved the document unanimously in September and sent it to the Board of Education for review and action. Negotiation ensued between Dr. Honig and Dr. Laufenberg over the points just cited, but only two pages of the draft were discussed. Some phrases were removed. The section on evolution in this part of the Framework begins, "Evolution is the central organizing theory of biology, and has fundamental importance in other sciences as well."

A later passage said, "Scientists base the theory of evolution on observances of the sequences of appearance, change, diversification and disappearance of forms through the fossil record. These sequences show that life has continually diversified through time, as older species have been replaced by newer ones." Curiously, the second sentence was deleted. But the rest of the section, like the 1978 Framework and its 1984 addendum, clearly lays out the evidence for evolution and the solid foundation on which the theory of evolution is based.

The sentence "There is no scientific dispute that evolution has occurred and continues to occur; this is why evolution is regarded as a scientific fact" has been replaced by "Thus, the theory of evolution is the accepted scientific explanation of how these changes occurred." This mystifying word play was designed only to appease creationists. They removed a paragraph showing that a booklet by the National Academy of Science had unequivocally rejected "creation science" and documented it as nonscience. Also removed was a paragraph summarizing the U.S. Supreme Court's *Edwards v. Aguillard* decision, in which the court found "creation science" a thinly disguised attempt to introduce a sectarian religious belief into public school classrooms, for which "equal time" is unconstitutional.

Will the creationists be appeased by these changes? Consider the rest of the document. In several places it says unequivocally that evolution is a fact, and it is also a theory. It says that because all organisms contain DNA and RNA, they must have inherited it and evolved from a common ancestor. It says that evolutionary relationship is the basis of biological classification. It says that the homology of tissues and organs among living things is based on evolution, and that teachers should show students how these features appeared and were modified in structure and function through evolutionary history. Evolution is given as one of the six central themes of science, along with Energy, Patterns of Change, Systems and Interactions, and others. The term "evolution" appears in the



document more than 200 times.

Furthermore, in the Science Content section of the new Framework, the Cells, Genetics, and Evolution section is not only maintained but expanded with more evolutionary coverage than ever before. The opening paragraph says that "The unifying theory of biology is evolution; as Theodosius Dobzhansky said, nothing in biology makes sense without it. It is accepted scientific fact, and has been since the mid-1800s, that organisms are descended with modification from other organisms. The patterns, processes, and mechanisms of this descent make up the theory of evolution. ... Evolution explains why similar structures in different organisms are similar, and is a highly predictive and (for past events) retrodictive theory. The classification of organisms, indeed, all of comparative biology, is based on evolution. *Curricula must reflect this centrality of evolution in the biological sciences* (emphasis added)."

Does this sound like it will please the religious right? Hardly. Then what did the eleventh-hour changes on two pages represent? In my view, they only represent an acknowledgment that certain politically conservative board members, appointed by a conservative governor, put politics before their public trust. They do not care how foolish they appear in public, or how futile their conciliatory gestures are. As for the religious right itself, the new Science Framework leaves them totally disenfranchised from the public educational system in California. They chose not to participate in the process, preferring back room politicking and last-minute pressure to promote their goals. Did they succeed? Somewhat, perhaps, but nowhere near as well as they wanted to, nor as well as they would have several years ago, in an even more conservative political climate.

Granted, the religious right will continue to be most effective in harassing individual teachers and administrators at the local level. But the new Framework incorporates substantial protection for the public school teacher and plenty of evidence to turn away creationists. The new Framework gives the creationists only cold comfort.

ASA's *Teaching Science... Revised*

The American Scientific Affiliation has revised and reprinted its *Teaching Science in a Climate of Controversy*, a 48-page booklet intended to be a "middle way" between materialist evolution and "scientific" creationism. Condemned by some evolutionists as creationist, and by young-earth creationists as evolutionist, the book itself has been in a "climate of controversy" since its original publication in 1986. The book was criticized (and less frequently praised) as well by several NCSE members in reviews published in the *Creation/Evolution Newsletter* 7(2), 7(3), and 7(4).

Miscellaneous

Polonium Halos

Odom, A. L. and W. J. Rink. 1989. Giant Radiation-Induced Color Halos in Quartz: Solution to a Riddle. *Science* 246(4926):107-109 (6 October). Proposes a mechanism to explain Gentry's "Tiny Mystery."

Burgess Shale

Morris, S. C. 1989. Burgess Shale Faunas and the Cambrian Explosion. *Science* 246(4928):339-346 (20 October). Concludes that microevolutionary processes can probably explain this early radiation of forms.

Earth's Magnetic Field

Bioxham, J. and D. Gubbins. 1989. The Evolution of the Earth's Magnetic Field. *Scientific American* 261(6):68-75 (December). Contains detailed information refuting creationist Thomas Barnes' claim that the earth's magnetic field is a simple dipole decaying exponentially.

Neutral Theory of Molecular Evolution

Kimura, M. 1979. The Neutral Theory of Molecular Evolution. *Scientific American* 241(5):98-126 (November). A readily accessible, decade-old source that refuted much of Denton's molecular biology long before Denton wrote it.

RESOURCES

T a p e s

Symposium tapes

1989 Annual Meeting, Full Symposium <i>"Only a Theory": Presenting Evolution to the Public</i>	(2 tapes)	\$8.00
1988 Annual Meeting <i>Meeting the Challenge of Creationism</i>	(2 tapes)	\$8.00
<i>Teaching Evolutionary Theory</i>	(2 tapes)	\$8.00
1987 Annual Meeting, Full Symposium <i>Scientific Creationism: Facing Up to It!</i>	(3 tapes)	\$12.00
1988 AAAS Pacific Division Symposium <i>Communicating Evolution to the Public</i>	(3 tapes)	\$12.00
1982 AAAS Pacific Division Symposium <i>Evolutionists Confront Creationists</i>	each	\$3.00
John Patterson, <i>Probability & Thermodynamics</i>		
Robert Root-Bernstein, <i>History & Philosophical Issues</i>		
Russell Doolittle, <i>Origin of Life</i>		
Brent Dalrymple, <i>Age of the Earth</i>		
Joel Cracraft, <i>Systematics & the Fossil Record</i>		
Vince Sarich, <i>Human Evolution</i>		
William Thwaites, <i>General Discussion & Questions</i>		

Debate tapes

1987 Fezer/Doughty	(2 tapes)	\$8.00
1988 Thwaites/Gish	(3 tapes)	\$12.00
1988 Saladin/Gish	(2 tapes)	\$8.00
1988 Wakefield/Taylor	(1 tape)	\$4.00
1987 Krantz/Gish	(2 tapes)	\$8.00

Lecture

1976 K. Mather, The Scopes Trial	(1 tape)	\$4.00
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Loaners

E.C. Scott on Bob Larson Show	\$2.50 ppd
E.C. Scott on John Stewart Show	\$2.50 ppd

T r a n s c r i p t s

1984 Saladin/Gish (Evolution vs. Creationism)	\$6.75 ppd
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RESOURCES continued

AAAS Book on Science and Creation Still Available

The American Association for the Advancement of Science publication, *Science & Creation: Geological, Theological, and Educational Perspectives* by Robert W. Hanson, can be ordered directly from AAAS at:

AAAS Books
P.O. Box 753
Waldorf, MD 20604

The cost is \$24.95; on prepaid orders, AAAS pays the postage and handling charge. (In California, add sales tax.)

More Roadside Geology — from AGI

The American Geological Institute offers *Roadside Geology of US Interstate 80 Between Salt Lake City and San Francisco*, by W. Kenneth Hamblin and J. Keith Rigby. Nontechnical, with maps and photos. It is available for \$3.00 (plus \$1.00 postage for orders under \$10) from:

American Geological Institute
4220 King Street
Alexandria, VA 22302-1507

(Virginia residents add 4.5% sales tax.)

The AGI also publishes Newell's brochure, *Why Scientists Believe in Evolution*. Multiple copies are available from them at \$25.00 per 100.

Note: Some New Tapes Available

Wakefield/Taylor Debate

Taped April 4, 1988 at the Mensa Regional Meeting in Toronto.

Krantz/Gish Debate

Taped March 3, 1987

Lots of New Books

The Tyrannosaurus Prescription

Isaac Asimov

One-hundred-and-one essays on a wide range of subjects by the best-known science writer living today.

Blueprints

Maitland Edey and Donald Johanson

This book traces the evolution of evolution, from man's first conception of the startling process to the new-found ability to alter its course.

Wonderful Life

Stephen Jay Gould

Focusing on the Burgess Shale, Gould looks at "progress" vs. luck in the history of evolution.

The Hominid Gang

Delta Willis

A vivid update on the search for human origins, profiling key investigators and chronicling discoveries. A behind-the-scenes report on scientific adventure, rivalries and controversies.

Voices for Evolution Finally Published!

Thanks to a grant from the Richard Lounsbery Foundation, NCSE has published its long-awaited compendium, *Voices for Evolution*. The book is intended to show school boards, principals, teachers, and other decision-makers that there is strong support in the scientific, educational, and religious communities for the teaching of evolution and against the teaching of "scientific" creationism in schools. Originally a project of former NCSE board member Kenneth Saladin, the project was later taken over by Betty McCollister of the Iowa CC. A 3-part book of 143 pages, *Voices* contains statements from 30 scientific organizations, 15 religious organizations, and 23 educational organizations. Isaac Asimov kindly wrote the introduction. It costs \$5.00, with postage an additional \$.90.

All NCSE members will receive a free copy in January 1990. We hope you enjoy it. We thank Ken Saladin, Betty McCollister, and all who helped them, especially Don Huffman, John Patterson, Gee Ju Moon, Jodi Griffith, and Liz Hughes.

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FROM THE GRAPEVINE

Two Americans, Chuck Aaron and Robert Garbe, discovered and photographed Noah's Ark from a helicopter, according to an Associated Press story in the September 23, 1989 Richmond *Times Dispatch* (as reprinted in *Christian News*, October 2, 1989). The Ark is in eastern Turkey, resting at about 14,500 feet elevation on the southwest side of Mount Ararat. "We are 100 percent sure this is the Ark," Aaron said.

The Ark has been discovered before at various sites on the same mountain. This latest discovery took place on September 15. Aaron claims the Ark is usually covered by a glacier, but it was exposed by an abnormally warm summer. A team of 20, including geologists and archaeologists, will ascend the mountain next June. Presumably the team will include Garbe, a veteran Arkeologist who reported on previous adventures on Mount Ararat at the 1985 National Creation Conference in Cleveland.

It is noteworthy that, although Genesis 8:4 says that the Ark landed "upon the mountains of Ararat," creationists keep discovering the Ark on this particular "Mount Ararat," known to the Turks as Agri Dag. In *Where Is Noah's Ark?* Lloyd R. Bailey of the Duke Divinity School showed that (*contra* creationist "scholarship") the tradition connecting the Ark with Agri Dag goes back only to medieval times. Ancient sources identify several *other* mountains as the Ark's landing place, and if the plurality can be trusted, Noah actually landed on Jabal Judi in Iraq!

Henry Morris has recently published yet another book, *The Long War Against God*. A history of Satan's earthly activities, this work traces evolution back to its origin in ancient Babylon. In two previous works, Morris hinted that Satan came down to the top of the Tower of Babel to reveal

evolution to the Babylonian king Nimrod and his priests. In *The Troubled Waters of Evolution*, Morris wrote that "solid evidence for [this] sequence of events is admittedly tenuous." Presumably, this new work has complete documentation.

The Lutheran Church-Missouri Synod (LC-MS) is in the midst of a battle-royal that could end in schism. Recently elected president Ralph Bohlmann is (by LC-MS standards) a liberal. Soon after he took office, Robert Preus, conservative president of the LC-MS Fort Wayne (Indiana) Seminary, was "honorably retired." Conservatives (led by *Christian News* editor Pastor Herman Otten) are outraged, and not just by the sacking of Preus. Bohlmann is also considered soft on heretics. For example, a pastor who was sacked from the seminary for refusing to state that the Bible categorically prohibits the ordination of women has not yet been defrocked. Worse, Otten, *Bible-Science Newsletter* editor Paul Bartz, and others allege that some LC-MS pastors are known to be *evolutionists*.

Horrors!

J. Richard Wakefield and Gregg Wilkerson will present a joint paper on polonium halos and Robert V. Gentry's interpretation thereof at the Second International Conference on Creationism (ICC) in Pittsburgh next summer. Wakefield needs no introduction to regular readers of *NCSE Reports*. Wilkerson, a 7th Day Adventist geologist, has long been associated with Students for Origins Research. The two met when Wilkerson went to Ontario to see some of Gentry's sites for himself. Wakefield is apparently the first noncreationist ever accepted as a speaker at a creation conference.

A Matter of Degree: An Examination of Carl Baugh's Credentials

Glen J. Kuban

Texas "man track" advocate Carl E. Baugh claims to have "degrees in theology" and advanced degrees in science. Baugh's "man track" claims have been evaluated and refuted on the basis of the physical evidence alone,^{1,2} but an examination of his claimed credentials is warranted as well. By claiming them, Baugh has linked their validity to his scientific credibility and integrity. The issue not is whether Baugh should have a science degree (it is possible to do good scientific work without a degree), but whether the degrees he claims are legitimate and have been represented accurately.

Although questions have been raised before about Baugh's science degrees³, even Baugh's claimed theology degrees appear somewhat overstated. The theology degree most frequently claimed by Baugh is a Doctor of Philosophy in Theology from the California Graduate School of Theology (CGST). Baugh described this as an "earned degree"⁴ (implying normal course work and graduation); however, attempts to verify the degree from CGST have been unsuccessful. Baugh acknowledged in recent correspondence that he does not have an actual degree from the school, but he maintains that he completed the necessary work.⁵ In any case, the school is not accredited by any national or regional accrediting agency⁶ and evidently has little standing in the academic community (it is not even listed in standard college and graduate school directories).

A December 1986 "vita" by Baugh did not mention the degree from CGST, but it did list "1959, Graduate of Theology, Baptist Bible College;" "1961, Bachelor of Arts, Burton College;" and "1983, Master of Arts, Luther Rice in Conjunction with Pacific College of Graduate Studies."⁷ Baptist Bible College indicated that "Graduate of Theology" was a three-year program

and not really a degree. The school was not accredited at the time (although it is now). I could not verify the existence of Burton College. Luther Rice is an unaccredited seminary in Jacksonville, Florida. A representative from Luther Rice indicated that Baugh graduated in 1984 with an M.A. in "Biblical archaeology...through our Australian extension...since we don't give a degree in that."⁸ However, the "Australian extension" appears questionable at best, and it is related to Baugh's science degrees as well (explained below).

The specific science degrees claimed by Baugh (or attributed to him) have varied somewhat from account to account.^{9,10,11,12} In recent years, Baugh has claimed a "Masters Degree in Archaeology from Pacific College" and a "Doctor of Philosophy Degree in Anthropology from College of Advanced Education."¹³

Baugh gave the location of the College of Advanced Education (CAE) as Irving, Texas; however, the Chamber of Commerce, Department of Taxation, and phone directory in Irving have no record of the school. When pressed by an assistant for the address of CAE, Baugh gave it as "2355 West Pioneer, Irving, TX, 75061" and indicated that its dean was Dr. Don Davis.¹⁴ The address appears on a small house in Irving, located next to Sherwood Baptist Church, which shares the same address, and whose pastor is Rev. Don Davis. Davis indicated that CAE is a "missions" school with no science classes or facilities.¹⁵ The school is neither accredited by any national or regional agency, nor certified by the Texas Higher Education Coordinating Board (which certification must be obtained to legally grant degrees in Texas). In fact, none of the educational organizations I contacted had ever heard of the school.¹⁶

Rev. Davis explained that Baugh's anthropology degree was granted "through" CAE, "under the auspices of Clifford Wilson in Australia." However, the reason for this curious arrangement was not explained, and the connection to Wilson (discussed below) only further undermines the validity of the degree.

KEEPING TABS



A copy of Baugh's CAE "diploma" (furnished by Baugh) indicates that CAE is the "Graduate Division" of International Baptist College (IBC).¹⁷ IBC is incorporated in Missouri (where Baugh lived before coming to Texas); however, the school is neither accredited nor certified to grant degrees in any subject.¹⁸ In fact, IBC appears to be as lacking in science facilities and courses as CAE. When I called IBC in 1986, the man answering the phone stated that IBC is a correspondence school for Bible studies based on cassette tapes by Jerry Falwell. Further, the letterhead of IBC listed Baugh himself as "President."¹⁹ Thus, Baugh's anthropology degree originated from a branch of his own unaccredited, correspondence Bible school.

Baugh's doctoral "dissertation" is largely a compilation of antievolutionary arguments on the origin of man, and it includes an extensive section on missions that consists of literature by others that was photocopied and inserted, although Baugh notes that he had permission to copy the material.²⁰

Pacific College Incorporated (PCI)—a.k.a Pacific College of Graduate Studies (PCGS) and Pacific International University (PIU)²¹—from which Baugh claims a master's degree in archaeology, traces to a small, private, religious school in Australia, headed by Clifford Wilson.²² Ian Plimer, a member of the Australian Research Council and professor of geology at Newcastle University, reported that PCI is not accredited or authorized to grant degrees. Plimer stated, "Any degrees from this 'College' are illegal in Australia and are clearly being used fraudulently in the U.S.A."²³

Clifford Wilson, is (or was) a close associate of Baugh,²⁴ and he evidently was Baugh's partner in IBC. Wilson's name was listed, along with Baugh's, on the incorporation papers for IBC. Wilson also was originally listed as "Vice President, International Studies" on the letterhead of IBC,²⁵ and the location of IBC was given as Melbourne, Australia on a metal plaque displayed at Baugh's first "man track" site. Moreover, a recent booklet by Baugh states that Baugh received a Ph.D. in Anthropology from the College of Advanced

Education in conjunction with Pacific International University.²⁶ Thus, all of Baugh's alleged science degrees seem to trace circuitously back to Baugh himself and his partner Wilson — through their own unaccredited religious schools and/or branches of them.

Last, there is no evidence that Baugh has even an undergraduate degree in any field of science. Not having science degrees is no crime; however, misrepresenting one's credentials is another matter. Baugh's alleged science degrees appear to be as dubious as his "man track" claims, and they ought to be of serious concern to his fellow creationists.

Don Patton's Credentials

Since early this year, Don Patton, a close associate of Carl Baugh and leader of Metroplex Institute of Origins Science (MIOS) near Dallas, has claimed Ph.D. candidacy in geology from Queensland Christian University (QCU) in Australia.²⁷ However, QCU is another unaccredited school linked to Clifford Wilson.²⁸ When questioned about this, Patton indicated that his degree is on hold pending the accreditation of QCU. However, Ian Plimer reported that QCU has not applied for accreditation in any field of science, and that "PCI, QCU, PCT, and PCGS have no formal curriculum, no classes, no research facilities, no calendar, no campus, and no academic staff."²⁹

The printed program of the 1989 National Conference on Biblical Origins in Dayton, Tennessee implied that Patton has at least four degrees from three different schools.³⁰ Patton made no correction to this during his conference lectures, but he afterward clarified to me that he has no degrees. He indicated, however, that he has taken many undergraduate courses in geology.

With surprising boldness, Carl Baugh recently appeared on a radio talk show in Texas claiming the same degrees discussed above, plus a new "Ph.D. candidacy in paleoanthropology from Pacific College." Baugh complained that critics were now attacking his credentials and those of other fine creationists, and he praised his associate, "Dr. Don Patton."³¹

References

1. Kuban, Glen J., 1989, "Elongate Dinosaur Tracks," in *Dinosaur Tracks and Traces*, edited by David D. Gillette and Martin G. Lockley, Cambridge University Press, New York, pp. 61-64. Originally presented in 1986 at the First International Symposium on Dinosaur Tracks and Traces, Albuquerque, New Mexico.
2. Hastings, Ronnie J. 1988, "Rise and Fall of the Paluxy Mantracks," *Perspectives on Science and Christian Faith*, (J. of the Amer. Sci. Affil.) 40(3): 144-155. See Hastings' bibliography for other articles regarding Baugh's work and the Paluxy controversy in general.
3. Hastings, Ronnie J., Rick Neeley, and John Thomas, "A Critical Look at Creationist Credentials," *Skeptic* 3(4): 1,5.
4. Somervell (Texas) *Sun*, Jan. 14, 1987, "Are They Genuine or Fabrications??"
5. Baugh, Carl E., correspondence, September 18, 1989. Baugh stated that he told his advisor at CGST that "possession of the actual degree was unnecessary, because the research work in theology was its own reward."
6. The Association of Theological Schools in the U.S. and Canada reported that California School of Theology is licensed in California but not accredited by ATSUC. The Western Association of Colleges and Schools and Accrediting Association for Bible Colleges reported that CGST is not accredited by their agencies, and they had no record of the school (telephone conversations, August 1989).
7. Baugh, Carl E., 1986, *Anthropology and Religious Motivation*, "submitted in partial satisfaction...for the degree of Doctor of Philosophy in Anthropology," College of Advanced Education.
8. Gooding, Tammy, Luther Rice Seminary, telephone conversation, August 23, 1989.
9. Bartz, Paul A., 1982, "Paluxy: New Site, New Prints, New Interest," *Contrast* insert in *Bible-Science Newsletter*, September, 1982, 20(9). The article stated that Baugh was "completing his second doctorate in archaeology."
10. At the 1983 National Creation Conference in Minneapolis, a man introducing Baugh stated that Baugh "is working on his Master of Science degree in archaeology at Pacific College..." and "...is studying also under Dr. Clifford Wilson to get his doctorate in paleoanthropology" (recorded on a tape entitled *Latest Human and Dinosaur Tracks*).
11. Curtis, Tom, "Paluxy Tracks Fuel Man's Origin Debate," *Cleburne (Texas) Times-Review*, October 10, 1984, 74(240):1. The article stated that Baugh had a "master's degree in archaeology" and "is currently pursuing a master's in ancient paleontology."
12. Anonymous, "Are They Genuine Or Fabrications??", *Somervell Sun*, January 14, 1987. The article stated that Baugh had a "Masters in Archaeology, Pacific College in Melbourne, Australia, Ph.D. in anthropology, College of Advanced Education in Irving, Texas, where he studied with mentor, Dr. Clifford Wilson, and, earned doctorate in Theology at the California Graduate School of Theology...."
13. Baugh, Carl E. and Clifford A. Wilson, 1987, *Dinosaur: Scientific Evidence That Dinosaurs and Men Walked Together*, Promise Publishing, Orange, CA.
14. Person, Kirk, personal correspondence, 1987.
15. Davis, Don, personal communication, December 31, 1988.
16. The Association of Theological Schools in America, Accrediting Association for Bible Colleges, and North Central Association of Colleges and Schools, telephone conversations, August 1989. The Southern Association of Colleges and Schools also reported that CAE is not accredited (correspondence to John Thomas, June 27, 1989). The Texas Higher Education Coordinating Board indicated that CAE, IBC, and PCI do not hold certificates of authority to grant degrees in Texas (correspondence to John Thomas, May 4, 1989).
17. Baugh furnished a copy of the diploma to John Thomas, president of the North Texas Skeptics. Curiously, the date on the diploma (December 1987) is about a year later than the time Baugh began claiming the degree (see ref. 12).

18. The agencies listed in ref. 16 indicated that IBC is not accredited or certified to grant degrees in Texas (correspondence to John Thomas, June 1989), and they had no record of the school (telephone conversations, August 1989).
19. A letter to me from Carl Baugh, dated March 10, 1983 was written on the letterhead of International Baptist College.
20. Baugh, Carl E., correspondence, September 18, 1989.
21. Australian paleontologist Ralph E. Molnar reported that Pacific College of Theology was amalgamated with Pacific College of Graduate Studies to form Pacific College Incorporated (personal correspondence, October 1986). Evidently, "Pacific International College" was sometimes used by Baugh as a synonym for Pacific College Inc.
22. Barry Williams, correspondence to Ron Hastings, March 30, 1989.
23. Plimer, Ian, correspondence from Ian Plimer to Ronnie Hastings, March 1989. When Baugh was asked about the questionable status of CAE in Texas (ref. 3), Baugh indicated that he is transferring his credits from CAE to Pacific College.
24. Wilson, a well-known creationist author, worked with Baugh on some Paluxy "man track" excavations, and he coauthored a 1987 book with Baugh (ref. 15). Evidently, Wilson has done archaeological work, but he does not have a degree in the subject. His Ph.D. is in psycholinguistics.
25. Under Baugh's name on the letterhead (reference 21) was Wilson's name and title, obscured with "white-out" but visible when held to light.
26. Baugh, Carl E., 1989, *Panorama of Creation*, The Southwest Radio Church, Oklahoma City, OK.
27. Patton indicated this during MIOS meetings in 1989. See also ref. 30.
28. Plimer, Ian, FAX transmission, August 14, 1989.
29. Plimer, Ian, FAX transmissions, August 14 and September 27, 1989.
30. Bryan '89, National Conference on Biblical Origins, August 10-12, 1989, at Bryan College, Dayton, TN, sponsored by the Bible-Science Association and Bryan College, printed program, p. 20. The program stated, "Mr. Patten (sic) received degrees from Florida College, Tampa, Florida, and he also received a degree in Geology from Austin Peay in Tennessee and from Indiana State University. He is in the final step of obtaining his doctoral degree from Queensland University in Australia." The person introducing Patton corrected the misspelling of Patton's name but not the errors regarding his degrees.
31. Baugh, Carl E., during "Talk Etc." radio program, KCBI, F.M. 90.9, August 16, 1989, Criswell Radio Network, Arlington, Texas.

Baugh's alma mater, the College of Advanced Education, is pictured at right. Nearby Sherwood Baptist Church also uses the same address.



Editor's note: Because of the serious nature of Kuban's charges, the Reverend Mr. Baugh and his colleague Don Patton were furnished copies of Kuban's paper and invited to respond. Reverend Baugh accepted the invitation.

Reverend Baugh Replies...

Gentlemen:

Following is the text of my response to the proposed article on credentials by Glen J. Kuban. You have my permission (in fact, my insistence) to publish it in full along with the text of Mr. Kuban's article:

Reference is made to "evaluation" and "refutation" of Baugh's "man track" claims ... on the basis of physical evidence alone." It will be of interest to note that I have now completed a 400-page manuscript documenting the existence of human footprints among dinosaurs prints along the Paluxy. Its validity is supported by extensive video documentation of the excavations in progress. This basic issue can hardly be dismissed without extensive investigation of *all the details* by impartial scholars. Mr. Kuban knows this.

Reference is made to my dissertation as being "largely a compilation of anti-evolutionary arguments on the origin of man." Instead, original research in developing the paper took me to more than a dozen countries (listed within the paper). Its basic contribution to human knowledge (stated within its text) is an identification of Charles Darwin's phobic pre-occupation with his own conclusions relative to interpretations on life origins. The paper further develops his missionary zeal and identifies it with continuing humanistic preoccupation and missionary zeal. Regarding the dissertation material illustrating Christian missions, I have more than simply the permission to copy the body of material. I hold the copyright to publish this missions material as a researched body illustrating Christian missions and have done so in *The Great Commission Missionary Bible*. But, Mr. Kuban knows this.

Mr. Kuban laces his article with inferences that the work that I am doing and the courses of study that I have pursued have been totally lacking in scientific merit. IBC, which sponsors the research at Glen Rose, and PCGS, under whose independent auspices I am continuing to study, were both duly chartered to purposefully carry on "educational and scientific activities." We are developing an extensive laboratory with sophisticated equipment. However, Mr. Kuban knows this.

Some of the article's additional inferences deprecate PCGS as lacking in academic nature. Instead, the list of the school's academic supervisors and consultants totals fifteen individuals with Ph.D. degrees and nineteen additional individuals with Masters degrees. As of October 1989 the college has 164 active students. Its president, Clifford Wilson, Ph.D., has four earned degrees from fully accredited institutions. His coursework included units of field archaeology and a large number of related subject areas. He was honored as "An Outstanding Educator in America" in 1971. Legal opinion has testified that "off-shore" degrees issued by Pacific College are perfectly legal. The work of the schools identified with his leadership is of excellent academic status. Again, Mr. Kuban knows this.

The stakes in the research on contemporaneous human and dinosaur occupation at Glen Rose are high. Attempts to discredit the scholastic procedures involved in the research provide an often-used "smokescreen" to divert attention from the far-reaching implications of finding such evidence of co-habitation. Such findings would seriously disrupt conventional interpretations of life origins and would render the standard geologic model as being woefully inadequate. Academic posture would be compelled to make some rather dramatic re-adjustments. Academic instruction would of necessity include a broader objective disclosure in its content. Of course, Mr. Kuban knows this.

Carl E. Baugh

Kuban Replies ...

Baugh's initial remarks are undermined by the fact that many creationist researchers have questioned Baugh's claims of "mantracks" and other anomalies, and those that unreservedly accept them do not appear "impartial." My questioning of his claims is not based on preconceptions against them, but on extensive investigation on the evidence.

Baugh refers to the charters and purposes of IBC and CAE, but he provides no evidence that either school is accredited or authorized to grant Ph.D.s in science. Neither did he address any statements about his theology degrees.

Regardless of how many countries Baugh visited, his dissertation appears largely lacking in original field or laboratory research. Whether Baugh holds the copyright to the material he photographed is unverified and largely irrelevant. My point, which still holds, is that a major segment of his dissertation consists of photocopied material by other authors.

Baugh suggests that his work in Glen Rose is sponsored by IBC and reflects its high scientific quality. Baugh's facilities at Glen Rose, however, do not resemble those of a valid, science-degree-granting institution, and his research there entails serious problems, as previously discussed. Further, it is unclear whether his work at Glen Rose is supposed to represent the work and status of IBC, or his work as a *student* there. This ambiguity further emphasizes the questions regarding Baugh as both president and degree recipient of IBC.

The figures regarding the number of students and staff members at PCGS are ambiguous at best, as they do not indicate how many, if any, are in *science* programs. Indeed, Baugh provides no evidence to refute Plimer's statements that PCGS has no formal science curriculum, faculty, facilities, or other qualifications to grant science degrees. Baugh maintains that "offshore" degrees issued by Pacific College are "perfectly legal." Any science degrees from PCGS are illegal in Australia, however, and they are of dubious value in the U.S., for reasons already discussed.

Baugh's remark about a "smokescreen" seems to be a smokescreen itself. I and others have dealt directly and extensively with the physical evidence relating to the "mantrack" claims in published articles and public forums. Of course, Mr. Baugh knows this.

Glen J. Kuban

Dannemeyer Attempting to Get Amendment Out of Committee

Eugenie C. Scott

Congressman William E. Dannemeyer is only four signatures away from getting a special meeting of the Judiciary Committee to consider his "Community Life" constitutional amendment permitting prayer and creationism in schools (see *NCSE Reports* 9(3):1, 9(4):19). Normal constitutional procedure would be for the bill to be passed from the Subcommittee on Civil and Constitutional Rights to the Judiciary Committee to the House, and then to the Senate. If passed, the bill then would go to the States for ratification. The amendment has been held up in committee, and Dannemeyer wants to get it out.

On December 12, 1989, Dannemeyer appeared on the nationally televised Paul and Jan Crouch show on the Trinity Broadcasting Network to request help from listeners across the nation for a discharge petition for his amendment. This is an end-run around committee chair Jack Brooks (TX) who is bottling up the bill. One type of discharge petition requires the signatures of half the members of the House to take the bill out of the hands of the Judiciary Committee, but Dannemeyer is using a second option. He is trying to get a majority of the Judiciary Committee itself to request a special meeting from the chairman to discuss this one bill. He needs eighteen signatures, and he has fourteen.

There are thirteen Republicans on the Committee, and we can guess that most have voted with their colleague. The identity of the Democrat(s) is unknown to us. On the television program, Dannemeyer requested that pressure be exerted on the following Congressmen to encourage them to sign his petition: Staggers (WV), Boucher (VA), Bryant (TX), Glickman (KS), Mazzoli (KY), Hughes (NJ), Sangmeister (IL), Synar (OK), Schroeder (CO). All are Democrats, though there are other Democrats on the Committee who were not listed. We'll keep you posted.

A Two Model Approach to Book Hype

The fundamentalist press is hyping creationist attorney Wendell Bird's new two-volume work, *The Origin of Species Revisited: The Theories of Evolution and Abrupt Appearance* (New York: Philosophical Library, 1989). Essentially an updated and expanded version of Bird's Supreme Court brief for the Louisiana case, the book has a preface by Gareth Nelson, Chairman and Curator of the Department of Herpetology and Ichthyology at the American Museum of Natural History in New York.

Whoever wrote the hype sheets distributed by the Philosophical Library may have studied Wendell Bird's methodology. For example, here is how Gareth Nelson is quoted:

Perhaps the most scholarly effort among many of this kind in recent years... The book has virtue as criticism of evolutionary theory... He rolls the dice with style... Citing and quoting so widely in the recent literature, Mr. Bird creates a captive audience... Creationists might rejoice to have this book, as comprehensive and well written as it is, to champion their cause, but it is a book rather different from their usual fare, and I suspect that they will find it very difficult to understand in any depth...

Indeed, all of these snippets do appear in Nelson's preface, but there is much more. In the interest of Two Models, the following is the complete text of the four consecutive paragraphs from which the hype was extracted, with the quoted portions italicized:

Mr. Bird's [book] is not the first attempt to argue this case, nor will it be the last, but it is *perhaps the most scholarly effort among many of this kind in recent years*. In this respect it contrasts starkly with most, and perhaps all, of the "creation science" literature that has so far been published.

I do not know for whom Mr. Bird has written this book. Its arguments will not convince my evolutionist colleagues that they are wrong in the judgment that evolution is the better theory. *Creationists might rejoice to have this book, as comprehensive and well written as it is, to champion their cause, but it is a book rather different from their*

usual fare, and I suspect that they will find it very difficult to understand in any depth. So it probably will not convince them that they are wrong in their judgment, either. Some of my more cynical colleagues will see the book as a political document, and I probably will be chastised by them for writing this preface, as if in doing so I give aid and comfort to an enemy of true science. So why do I write a preface to a book that might merely confirm everyone in his point of view?

I do so because *the book has virtue as criticism of evolutionary theory*. It has virtue even though its criticism is loaded like the proverbial pair of dice. Indeed, when Mr. Bird rolls for evolutionary theory, who would expect anything but snake eyes to come up? Still, *he rolls the dice with style*. He rolls them over and over again with the same result.

I may be too optimistic to expect my colleagues to learn much if anything from Mr. Bird's effort. But there is something in his book for all of them, and they need no prompting from me to explore its pages. Many will look into it if only to see how their words are quoted therein. *Citing and quoting so widely in the recent literature, Mr. Bird creates a captive audience*. Indeed, in one way or another we have all — all the way to the Supreme Court of the United States — been captured by the creation/evolution controversy, in which Mr. Bird has played a prominent role.

Notice that the publicity quotes are lifted out of context and presented out of order. In fact, Nelson called Bird's effort "scholarly" in comparison to standard "creation science" works, which are notorious as trash (my term). He says the book has virtue as criticism despite Bird's loading the dice against evolution, and he implies that if creationists (presumably including Bird himself) actually understood the material, it might convince them that creationism is wrong! And he says Bird has a captive audience because many scientists will look in the book to see how they are quoted.

If ever a work was damned with faint praise in its own preface, this is it. One can only marvel at the cynicism of everyone involved.

NCSE Reports will publish a full-length review of *The Origin of Species Revisited* in a later issue.

Creationism, Revisionism, and *Christian News*

The *Christian News* (Box 168, New Haven, MO 63068) is a useful resource that is little-known among creationism-watchers. Originally the *Lutheran News*, this 24-page weekly tabloid was founded in 1962 by Herman Otten, a pastor in the Lutheran Church-Missouri Synod (LC-MS). Otten represents the extreme conservative wing of this conservative denomination, and it was he who suggested to fellow LC-MS pastor Walter Lang that he should found what is now the *Bible-Science Newsletter*.

Pastor Otten is something of an oddity, an arch-conservative editor who is willing to print material that challenges his personal views. Every issue of *Christian News* reprints stories and articles from secular and religious publications that catch Otten's eye for one reason or another. Much of the material concerns internecine warfare in the LC-MS (Otten is, of course, in the thick of it), but creationism, prayer in school, censorship, and other issues of interest to *NCSE Reports* readers are also covered. At \$15.00 per year, *Christian News* is a bargain.

For some time now, Pastor Otten has been an outspoken proponent of Holocaust revisionism, which insists that the Holocaust is a Jewish hoax. Otten was a featured speaker at the Institute for Historical Review's ninth annual revisionist conference held in the Los Angeles area last February, and the February 20, 1989 *Christian News* was a theme issue devoted to Holocaust revisionism. With Otten's encouragement, old-fashioned anti-Semites write letters and articles reminiscent of the 1920s and 1930s. For example, a letter in the October 30 issue says, "The CN readers are aware of the anti-Christian conspiracy which is directed mainly by the Judeo-Masonry and carried out by the Communists, Zionists and liberal 'goyim.' The international, mostly Jewish, financiers are the principle supporters in all the phases of the war on Christianity." The Talmud (a compendium of early Jewish writings that includes criticisms of Christianity) and "Talmudic Jewry"

are regularly blasted.

The emphasis on revisionism has apparently cost Otten some subscribers. The October 30 issue contains a long exchange between regular contributor Reverend Roger Kovaciny and Otten on the subject. Kovaciny neither affirms nor denies the reality of the Holocaust. He writes, "It doesn't make any difference to me whether Hitler killed six million Jews or six dozen. My point is that CN is supposed to be a Lutheran newspaper, and what possible concern is the Holocaust to Lutherans?" He is distressed because Holocaust revisionism turns off some readers, distracts Otten from more important issues, and damages the credibility of *Christian news*.

Pastor Otten is unmoved, and *Christian News* will continue to promote Holocaust revisionism. In this, he is consistent. Revisionist historians typically employ the same methods of logic and scholarship as the creationists he admires.

Patterson and Gish at Morningside College

John W. Patterson

Duane Gish and I were joint speakers at a convocation at Morningside College, Souix City, Iowa on September 20, 1989. Some time last spring, Mary Pointer, a student member of the convocation committee (and wife of Rev. James Pointer, minister of Sioux City Baptist Church) apparently arranged for Gish to speak on this date. (It was announced in the July *Acts & Facts*.) This upset some of the faculty and students at Morningside, and I was contacted on August 16. Mrs. Pointer told me my name was given to her by a creationist, but others on the committee said they called me because I was known as a member of the Iowa Academy of Science's Committee on Controversial Issues.

The initial proposal was for a two-member panel (Gish and me) to have a one-hour discussion before the convocation audience, but after I had accepted, the format was changed to

half-hour presentations by each of us, followed an hour later by the two-member panel discussion over lunch in a separate building.

We made our presentations before an audience of about 800 to 850 in a nearly full auditorium. I went first using overheads exclusively, and Gish followed using only slides. The auditorium session was videotaped, but not the question and answer session in the other building. Both audiences were polite, though both Duane and I got some *ad hominem* questions in the second session.

I focused on the fact that creationism as Gish and the ICR portray it is religion pure and simple; it is not science because it posits supernatural intervention and miracles by a supernatural creator. I explained why "all things supernatural" are strictly ruled out of modern science just as are "all forms of perpetual motion." Next, I quoted the creationists' science text (public high school edition) to prove that God is essential to scientific creationism. To further drive this point home, I read from the belief statement that all voting members of the Creation

Research Society must sign. To conclude, I reviewed briefly what happened to the creationist cases brought before the late Judge Overton and the Supreme Court. I noted that ICR might have its degree-granting license revoked in California because it represents its religion-filled courses as science.

Most effective were the extensive quotations from "The Hoax of Scientific Creationism," a scathing attack on ICR by biblical creationist and philosopher John W. Robbins (*Trinity Review*, July/August 1987; for a reprint, write to Trinity Foundation, P.O. Box 169, Jefferson, MD 21755). Scientists have long pointed out that creationists distort the truth. In arguing their case before the Supreme Court, creationists eschewed the word "creation" and essentially denied any supernatural element in "abrupt appearance." Robbins hammered them for this, charging them with blasphemy, lying about the meaning of words, and betraying the financial backers who responded to their religious appeals. Gish has no effective response.

Gish's presentation was the same as always (though shortened to a hour).

Current Contents

Bible-Science Newsletter, October 1989. The lead article, "Science: Revelation or Evolution" by Jonathan F. Henry, argues that evolution is Satan's attack on revelation. — Once again, Rev. Paul Bartz editorially blasts evolutionists for dishonesty because they refuse to "admit" that his fantasies about them are true. This editorial was apparently triggered by the privately circulated version of Frank Lovell's "Reflections of an Evolutionist," later condensed for *NCSE Reports* 9(5).

Bible-Science Newsletter, November 1989. The lead article, "Has Noah's Ark Been Found?" by Paul A. Bartz, reports on the latest (September) discovery of the Ark. Leading creationists are excited but somewhat skeptical. — "Business at Bible-Science" by BSA executive director Gregory A. Hull provides some concrete statistical data about BSA. — Nancy Pearcey's "World View" section is an interview with Murray (Kentucky) State University historian Burt W. Folsom, author of the

forthcoming book *The Scopes Trial Reconsidered*. Falsely implies (without actually saying it) that Henry Fairfield Osborn testified about Nebraska Man at the Scopes trial. Mostly the usual stuff. — The *Contrast* insert reviews Wendell Bird's *The Origin of Species Revisited: The Theories of Evolution and of Abupt Appearance* and also prints an extract.

Creation Research Society Quarterly, September 1989. "Are Human and Mammal Tracks Found Together with the Tracks of Dinosaurs in the Kayenta of Arizona? Part I: A History of Research and a Site Description" by Paul O. Rosnau, Jeremy Auldane, George F. Howe, and William Waisgerber. Interesting review and information on new "quasihuman ichnofossils." — "Is the Sun an Age Indicator?" by Don B. DeYoung and David E. Rush. The authors conclude that it is not. *Contra* many creationists, they are skeptical of the claim that the sun is shrinking, and they allow that it might be fueled by hydrogen fusion.

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