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When Is a School Not a School?

Creationists Take Advantage of Michigan's Charter School Law

Molleen Matsumura

Noah Webster Academy, one of the first schools to apply for funding under Michigan's new charter school law, is already embroiled in a lawsuit and the target of criticism from many quarters, including the Michigan ACLU chapter, the Michigan Education Association, and even some charter school advocates. As of this writing, the school is staffed by volunteers who hope to become paid employees, if and when state funding is approved. The school opened September 1st in Ionia, approved by the small local school board in return for 1% of per-student state payments (an estimated windfall of at least \$100,000 for the district). The volunteers are currently busy unpacking cartons of enrollment applications, an estimated 2,000 so far from all over the state of Michigan with additional applications arriving daily. When this work is done, they will turn to the task of answering telephones and programming computers.

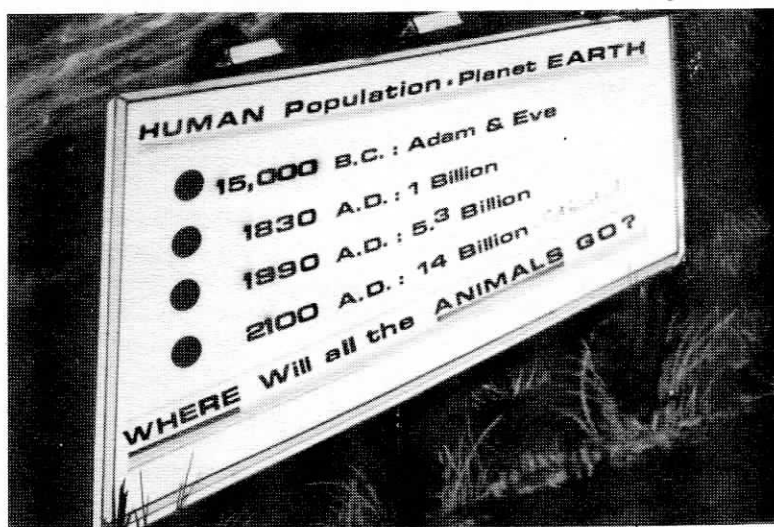
There may never be students in classrooms in the small log cabin that is the site of Noah Webster

Academy, and teachers may never meet their students. Instead, this school-that-isn't-a-school will operate as a support facility for home-schoolers. A major part of their budget will be spent providing computers and printers to families enrolled in the school, and eleven teachers will staff toll-free help-lines advising "parent volunteers" who will do the actual work of teaching their children. (One student interviewed said he was excited about getting a free computer powerful enough to run the latest computer games.) The curriculum will be whatever parents want it to be; the school recommends specific curricula, but parents are free to choose; some have already cho-

sen such religious materials as the Accelerated Christian Education curriculum.

The staff of Noah Webster can be expected to actively encourage creationism. The school's founder, David Kallman, an activist for religious home-schooling, said that the school will teach a "combination" of evolution and the Bible, adding, "If we have a family that's die-hard evolutionists and they want to teach it as fact, that's up to them. There are a lot of theories out there, and there should be consideration given to all" (*Wall Street Journal* 6/14/94). On September 16, the *WSJ* reported that the school's

Noah, ⇒ p. 7



EDITOR'S DESK

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A "Welcome" to several new NCSE Board Members has been delayed because of the press of other news. However, in April the Board added several new people to the roster, most of whom a lot of you have heard from before as contributors to NCSE publications. Frank Sonleitner, Professor of Zoology at the University of Oklahoma at Norman, is a long-time Supporter and contributing editor. Duane Jeffery, Professor of Zoology at Brigham Young University, has been a Supporter for years and served as a Board Member in a previous term in the early 80's. He is also a C/E Consulting Editor. Fred L. Beyer, Curriculum Specialist for the Cumberland County Schools, North Carolina, specializes in science education issues and has been actively helping formulate model national science policies. Elizabeth Stage, Co-Director of the National New Standards Project and on leave from the University of California at Berkeley president's office California Science Project. Andrew Petto, a primatologist at the University of Wisconsin-Madison, is Associate Director of the University of Wisconsin Center for Biology Education and affiliated with the Wisconsin Regional Primate Research Center in Madison.

The Board Meeting in April also elected Kevin Padian to the office of "President-Elect," replacing Laurie Godfrey who has gone on sabbatical to pursue research via a National Science Foundation grant.

New Supporters include geochronology expert Brent Dalrymple and National Academy of Sciences President Bruce Alberts. Dalrymple has just left a research position with the US Geological Survey to become a dean and professor at Oregon State University. Alberts is on loan to NAS from UC-Berkeley, where he is a chemistry professor.

Of course, departing Board Members will be missed and their help thus far greatly appreciated—and more of it looked forward to in the future! As former ex-Board Member Jeffery will testify, there is no escape.

With our previous issue, Betty McCollister joins us as a copy editor. An experienced writer, Betty can spot weird clauses and phraseology, point out bloviating obfuscations (this clause, for example!), and generally help us get better! On the other hand, she can luxuriate in the fact that I have not been able to send everything to her in Iowa, so she can claim (probably accurately) that errors are the result of her not getting to see the material in question or my failure to heed her advice!

New in *this* issue is what I hope will grow with time—a section of short answers to questions received about various specific topics. This time it was written by Dr. Knowzalot, but additional experts will be consulted in the future, so send us your questions!

John Cole

Cover photo: Vilas Park Zoo,
courtesy H. Iltis

Evolution in an Election Year

Molleen Matsumura
NCSE Network Project

NCSE members who have had the chance to hear Dr. Eugenie Scott on such programs as *Firing Line* or NPR's *All Things Considered* have heard her comment that, "Science is not democratic." Scientific knowledge is not decided by vote, but by following a particular set of rules for observing nature. Yet, as we all know, the truth can be hard to take, and those who have trouble accepting the truth about evolution have been using the democratic process to try to keep evolution out of schools. It's a hot topic this election year, with both attackers and defenders of evolution taking an active role, and NCSE has some highlights and some advice.

Texas may be the most powerful example of the extent of political influence creationists can exercise; they've succeeded in having a plank requiring school districts to teach creationism included in the state Republican Party platform. The call to withhold funding from candidates who don't subscribe to the platform may well affect numerous local elections, but the Republicans' gubernatorial candidate has said he disagrees with the plank. But he doesn't criticize creationism, only the requirement that it be taught, explaining, "That would be a local decision, a home-rule decision, if that's what a local school board decided to do." Democratic incumbent Ann Richards, perhaps aware of how many school districts *would* like to add creationism, doesn't op-

pose creationism outright, but suggests restrictions on "home rule," stating that she would support the right of school districts to include creation science to the curriculum provided that the course maintains the constitutional separation of church and state. Her spokesman added that such a course should not be substituted for any science or math requirements for college-bound students. Without knowing how such restrictions would be implemented, it's difficult to know what they mean: One course for college-bound students and another for the rest of Texas' future voters? Repeated lawsuits as districts discover they *can't* teach creationism without violating the first amendment?

In *Minnesota*, in an upset that surprised many observers, Allen Quist upset incumbent Arne Carlson at the Republican party convention. Quist's candidacy wasn't assured, since Minnesota also had party primaries this Fall, but temporarily had an outspoken state-wide creationist candidate.

In *California*, there's a new chapter in the story of Vista's creationist school-board members. While there weren't enough signatures to put their recall on the ballot in the primary election, it will appear on the November ballot, after continuing efforts by many of the same citizens who successfully opposed the addition of creationism to the local curriculum. In an adjoining district of San Diego County, "Scientists for Janet" are supporting Congressional candidate who is a former school board member and

who, unlike her opponent, is explicitly committed to separation of church and state and integrity in science education.

Conservative coalitions dominated by the religious right, including many advocates of both home-schooling the requirement that public schools introduce "scientific" creationism, have taken over Republican Party conventions and committees in a number of other states, including *Iowa, Alaska, and Virginia*.

In *Iowa*, the state Republican Party adopted a party platform calling for "scientific" creationism in public schools. The Waterloo (Ia.) School Board this summer voted 4:2 to require textbooks and science classes to give "equal time" to creationism, whenever evolution came up. A statewide outcry, and advice from NCSE members locally and nationally, managed to reverse this when moderate board members learned what a legal and intellectual thicket they were about to enter. Arthur Kropp, president of People for the American Way (and a former GOP fundraiser), said in June that the central political battle grounds were Texas, California, Georgia, Ohio and Virginia, but that there were concerted efforts by the religious right to take over school boards in at least thirty states—usually via local Republican politics.

In *Washington*, William C. Goodloe, a retired State Supreme Court Justice, is publishing *The Judicial Forum* (a judicial evaluation sys-

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efforts by
the religious
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over school
boards in at
least thirty
states

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Evolution, ⇒ p. 10

"Intelligent Design" Fails in Richland, WA

Earl W. Fleck
Biology Department
Whitman College
Walla, WA

❖
school board
impressed by
authorities
❖

In the Spring issue of *NCSE Reports* (14(1)) I wrote about how some citizens of the Washington community of Richland were demanding that the science curriculum include "intelligent design theory." On June 14, 1994, the Richland School Board accepted, by a vote of 4 to 1, the Science Curriculum Committee's recommended K-12 Science Curriculum which excluded the doctrine of intelligent design.

The evaluation of the science curriculum for all grade levels in the Richland School District has been going on for the past 3 years. Until this past January, the process attracted little attention. However, interest in curriculum evaluation exploded when the School Board directed the Science Curriculum Committee to evaluate the "doctrine of intelligent design" as an alternative to evolution. The push to force the Committee to include it in the K-12 science curriculum development came immediately after the citizens of Richland elected two "stealth" religious fundamentalists to the school board. Most voters were unaware of the fact that intelligent design theory was part of the agenda of several of the Richland School Board candidates. Nevertheless, immediately after her election to the Presidency of the School Board, Mrs. Terry Sharp directed the Science Curriculum Committee to consider including it in the nearly-completed K-12 science curriculum. There was much support in the newspaper and at School

Board meetings demanding a "balanced treatment" of life origins.

The combined efforts of many members of the community led to the defeat of including intelligent design theory in the curriculum. First, several citizens concerned about preserving the separation of church and state communicated with the NCSE and Americans United For Separation of Church and State and received guidance and contacts. They also solicited the support of the local ACLU chapter. In addition, many scientists at the Hanford Nuclear Reservation, a US government nuclear research center, involved themselves as concerned parents, scientists and subject-matter experts. Third, a few non-scientists strongly opposed the inclusion of thinly-veiled theology in science classes. Finally, a mother of children in the school district who had lived in Vista, California, until last year spoke eloquently about the costly legal defense that was necessary after the Vista School District attempted to include "intelligent design" in that curriculum. In my opinion, her statement was the most telling testimony the School Board heard.

Although there was not a single person acting as the focal point for the opposition, the coordination among the groups opposing intelligent design was good, if *ad hoc*. Supporters of the proposal included a wide array of people. Obviously, we found religious fundamentalists who had little or no understanding of science as well as physicians and other technical people. However, and more surprisingly, there were a few excellent and highly respected scientists who supported their

cause. Although most of these scientists opted not to publicly voice their support, a few did so. Mostly, they repeated the arguments seen in various creation science tracts. Usually, these scientists were stretching far outside their areas of expertise when they presented pro-creation/anti-evolution arguments. However, a well-respected scientist can make a strong impression on an audience and school board impressed by authorities.

What did I learn from this experience? If one is going to oppose the inclusion of intelligent design in a science curriculum one needs to have a firm grasp of the idea. Second, I feel that a more organized opposition group is necessary. The *ad hoc* association we had this time worked, but some centralized control would have been more efficient. Finally, I learned that we need to be sensitive to the deeply held beliefs of the supporters of the intelligent design theory. We may reject their connection of evolution with communism, materialism, immorality, etc.; however, they share many values with many members of the community. Dismissing these people as scientific Luddites and ridiculing them misses the point and insults those people who share their concerns. Further, polite and civil treatment of our opponents enhances our image before the school boards and media.

I am under no illusion that the vote marks the end of the story. The supporters of "intelligent design" made it clear that they will pursue the issue. However, next time we will be much better prepared. ❖

NEWS

Wisconsin Zoo Promotes Adam and Eve

**Eugenie C. Scott and
Molleen Matsumura**

The Vilas Park Zoo in Madison, Wisconsin, located near the respected University of Wisconsin, has installed an exhibit on population growth and potential problems to the environment and human welfare that may ensue. To the surprise of NCSE members in the community, this new exhibit attempts to illustrate exponential population growth with a figure of Adam and Eve, labelled "15,000 years BC." Beneath these supposed progenitors are a number of lines, each of which has increasing numbers of stick-figures, demonstrating the growth of the "human race," with the bottom line indicating the present day population (see p. 1).

There is also a mural at the zoo representing Noah's Ark, which is part of an overall theme of "stewardship" of the earth. NCSE Board member Andrew J. Petto, of the University of Wisconsin, describes the mural as, "fairly metaphorical, with skeletons (human) driving bulldozers over landfills that despoil the habitats of endangered species. On the upper right side, there is the ark metaphor . . . (which is) a pure and simple visual metaphor for the current concept of zoos as the 'arks' that will preserve species past our current destruction of the environment. The ark says 'ZOO' on it; the animals are singles, not pairs; and there is no overt visual reference to anything Biblical."

Petto encouraged members of the local scientific and educational community to contact the Zoo's

director and other county officials, and several of them did. Citing both church/state separation issues and also scientific inaccuracy, members responding included David Baum (formerly of the University of Wisconsin, now at Harvard), Art Edison, Elliott Sober, Carol Smith, Alice Kehoe, Hugh Iltis, and others. Sober's letter was to the point: "I am writing to register my opinion concerning the display at the Zoo in which Adam and Eve are depicted as living 15,000 years ago. It strikes me as inappropriate for a zoo to mount such an exhibit. The display compromises the principle of the separation of church and state. It also conflicts with what I take to be the Zoo's mission of presenting a scientifically accurate picture of the living world. I urge you to replace this religious time line of human history with a scientific—that is, evolutionary—presentation."

The local press inaccurately presented the dispute as being be-

tween "the atheists and the Zoo." Opposition to the display was spearheaded by the Madison-based Freedom from Religion Foundation, but support for church and state separation comes from a wide spectrum of citizens. In addition, even nonatheists can be offended by the idea that the human species began from two individuals, 15,000 years ago! Opposition to the display came from the scientific and educational communities, as well as the civil liberties people.

At this writing, there is good news. Responding to complaints from NCSE members, the Freedom from Religion Foundation, and others, the zoo director has removed the Adam and Eve display, but has not yet replaced it. In an interview with the local press, director David Hall stated he was a fundamentalist. We hope that this lapse of judgement does not presage other attempts to slip sectarian Christianity into zoo exhibits. ❖

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The human
species
began from
two
individuals,
15,000 years
ago!
❖

St. Paul, MN Institutes 4-6 Evolution Curriculum

Eugenie C. Scott

Last spring the Board of Education of St. Paul, MN, voted to accept an evolution curriculum for grades 4-6. The curriculum was proposed by the district's Curriculum Advisory Committee composed of parents and teachers. The "Life Through the Ages" curriculum will include information on geology, paleontology and evolution. It includes a clear presentation of evolution as a

well-supported scientific discipline.

NCSE member Jeff Koon served on the committee, and helped steer the resolution through the various mine fields of opposition it encountered over time. People wanting information on how to institute a similar curriculum in their own districts should write Jeff Koon, c/o NCSE, Box 9477, Berkeley, CA 94709. ❖

ICR Claims to Do Non-Scientific Research

Molleen Matsumura

❖
Tells IRS
they're
"non-
scientific"
❖

A favorite theme of fiction writers is the principle of "hiding in plain sight." Poe used it in his suspenseful short story "The Purloined Letter," and Douglas Adams uses it in his hilarious "Hitchhiker Series," in which the impending destruction of Planet Earth could have been averted by the proper response to a public demolition notice stored in the bowels of a large but obscure administrative building in a galaxy far, far away.

This must be just one more example of art imitating life, because NCSE has found some interesting facts about the Institute for Creation Research hidden in very plain sight—public records of information reported to the Internal Revenue Service. When it's time to avoid paying taxes, the ICR, who have been telling citizens and school boards across America that "creationism" is science, not religion, tells our government something different. They list their activities according to IRS code numbers 123—"Discussion groups, forums, lectures, etc.," and 124, "Study and research (non-scientific)." Did any reader miss that? It says "*non-scientific*." But that's not all! Even the Institute's tax exemption, just like Henry Morris' books, tells a different story. They don't claim just any non-profit exemption, but a *religious* exemption.

Doesn't that make you want to join the audience next time a creationist lectures in your town, and ask an innocent question or two? Something very simple like, "Dr. Gish, please

explain why you talk to us about your Institute's scientific research, but you tell the IRS that you're engaged in non-scientific research?" And if ICR asks for money, of course people will want to know where they get the 85% of their funding that they officially report does *not* come from "contributions by government and public." They must have quite a source, and at least until we break the \$200,000 barrier, we'll have to be jealous: in their most recent reports, the Institute for Creation Research listed assets of \$2,463,810 and revenue of \$3,977,643 (just a small percentage of the religious right fundraising for anti-evolutionism). Doesn't THAT make you want to send a donation to NCSE? (a non-profit tax exempt organization listed with the IRS as "educational" in nature). ❖

Rev. Preus Dies

The Rev. Jacob A.O. Preus died in August at age 74. In the 1970s, Preus led an attempt to purge the Lutheran Church—Missouri Synod which turned into a major schism. About 100,000 members left to form the much more conservative Association of Evangelical Lutheran Churches. While Preus was president of the two-million member parent organization 1969-1981, he charged that most faculty at Concordia College, its primary seminary, were heretics who taught that the Bible included parables as well as literal truths in treatment of such things as creation and Jonah and the whale.

Karl Popper is Dead at 92

Sir Karl Popper died in a hospital in Croydon, England from complications of cancer, pneumonia, and kidney failure September 16th. He was 92. Popper was a leader in the field of philosophy of science for many years, although in recent years his positivistic viewpoint had fallen from favor among philosophers. He is most famous for his simple argument that science could be defined according to testability—that untestable claims were not scientific, and that one could only try to disprove hypotheses, not to prove them. A failure to disprove after many attempts could give one more and more confidence in the idea but never totally "prove" it. Creationists continue to gloat over an early remark of Popper's that evolution was untestable and therefore not a science, even though Sir Karl later retracted this. He admitted his mistake had been made on the basis of a limited understanding of Darwin, and said that Darwinism and evolution were, indeed, his "cup of tea" after all. Creationists also misuse Popper to argue that evolution cannot be "proven" and therefore shouldn't be required in public school classes. Popper was dismayed to be exploited by anti-evolutionists, because even when he once called evolution a "metaphysical research programme" he was not equating it with creationism.

NEWS

Pittsburgh Area School: Rainbows Are Signs from God

John Cole

Pennsylvania's ACLU has filed suit on behalf of students in Pittsburgh's Moon Area School District to enjoin the teaching of creationism as science in biology class. Early reports of the case described the contents of a mandatory assembly attended by all biology students; these went beyond pseudo-science to clearly religious assertions that death appeared on earth only when Adam and Eve ate the forbidden fruit, and rainbows are God's promise that life will never again be destroyed by floods. But NCSE has learned that what happened in class the following day was even

worse. Students were asked to write their views concerning the assembly and share them with their classmates. One student who didn't want to state an opinion was pressured to express it, and at least one student who did express an opinion was told he would burn in hell!

Because the creationist presentation was so clearly religious, the ACLU is concentrating on this aspect of the case. However, thanks to the efforts of Manny Sillman, the NCSE Pennsylvania Liaison, a number of scientists are ready to testify if scientific issues are raised. As of this writing, the ACLU has filed for a permanent injunction against the

teaching of creationism, and the school district has not filed a reply. If there has been no resolution by March, when the next assembly is scheduled, a preliminary injunction will be sought. Meanwhile, one of the questions addressed to the school district in connection with the suit is whether they intend to hold the assembly again. If the District answers "yes," this would be proof that there is an imminent problem for the court to act upon, and a preliminary injunction might be sought sooner. NCSE is in contact with Pennsylvania's ACLU office, and we'll keep readers posted on any developments. ❖

Noah ← p. 1

science instructor "... plans, if asked by parents, to teach creationism, along with evolution. 'Personally, I believe in creationism. ... Ideally, you would teach both.'"

Maybe he'll teach neither. The Michigan Council Against Parochialism, a coalition led by the Michigan Education Association, has filed suit to prevent funding of Noah Webster Academy. The suit will place four arguments before the courts: 1) The school doesn't comply with the statute authorizing charter schools; for example, the statute calls for schools receiving a charter from a particular school district to serve students within that district. But Noah Webster accepts students from all over the state—and plans to pay 10% of its income to the district in which its

log cabin is located. 2) The school violates the Michigan state constitution's prohibition against aid to private schools. 3) The school may violate First Amendment requirements for separation of church and state. 4) The charter statute itself is overly broad and violates the state constitution. The Michigan chapter of the American Civil Liberties Union has also filed a brief arguing very strongly that funding the Noah Webster Academy violates the First Amendment. The brief points out that, if Noah Webster is publicly funded, both certified teachers and parents are functioning as public school teachers, and as such cannot teach any religious doctrine, including creationism.

Ted Kolderie, a Minnesota charter school activist, remarks, "If someone wanted to design a charter-school proposal to make the law look bad, this is the sort of thing one might do." As if to underscore Kolderie's concern, creationist and religious right computer bulletin boards around the US are specifically touting the Noah Webster approach as an ideal way to get around state and federal laws concerning church-state separation and to "defund 'government' schools." Its advocates expect a battle all of the way to the Supreme Court where they believe they stand a good chance of winning a case for state funding of "religious freedom for parents" (See *Lemon*, p. 11). ❖

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"If someone wanted to design a charter-school proposal to make the law look bad, this is the sort of thing one might do."
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Creationism on Campus

Molleen Matsumura
NCSE Network Project

Since we reported on the controversy stirred by Dean Kenyon's teaching of "intelligent design theory" at San Francisco State, NCSE has received more reports of creationist teaching on college campuses. By comparing notes with faculty and administrators, we've developed some tips that will be useful for NCSE members who have to deal with creationist claims, both inside science classrooms and elsewhere.

Creationism in Science Classrooms

The most important concern is presentation of "scientific creationism" (OR "intelligent design theory" OR "criticisms of evolutionary theory") in *introductory* courses. Professors who want to present these ideas in advanced courses are, after all, working with students who have the necessary background to evaluate their claims. But, since creation science isn't even a legitimate contender as a scientific theory, not even "encouragement of critical thinking" is a valid excuse for bringing it into an introductory course. At San Francisco State, the department chair's concern was that, since the course was for non-majors, students might never take another biology course, and so they needed a valid overview of the subject. But accuracy is just as important in courses for potential science majors, who need an adequate intellectual foundation for the advanced courses they will take

in the future. Even introductory majors' classes should teach state of the art science.

Students: if you are concerned about creationism in the classroom, you should bring the problem to the attention of the department chair. If your professor is approachable, mention it to her privately, first—she may have made a correctable mistake and realize it, if you point it out. In fairness to both your professor and your own concerns, don't make vague, unsubstantiated complaints! If you need to press the issue, make sure you have notes of the time, date, and content of lectures involving creationism, and copies of any relevant assignments or course materials. The issue is not whether students disagree with their professors, or are "uncomfortable" with views presented in class, but whether the materials presented are appropriate to the course.

Department chairs and other faculty: You may be tempted to act quickly, but it's important to be careful and deliberate about what you do. Questions of academic freedom are involved, and it's always best to observe due process in the first place. Before taking any action, confer with your colleagues, your dean, the campus human resources officer, and if appropriate, the campus attorney, about the procedures to follow when instruction is unsatisfactory. You may need to verify student complaints by visiting some classes or examining course materials. Most colleges have specific policies to follow regarding

such complaints, but not all of them are adequate. An instructor who introduces creationism into a science course may be doing it naively and may change her approach when the problem is explained, or she may be seeking out controversy and martyrdom. In either case, precipitous disciplinary action could be harmful to good science education by making martyrs, whether or not they are willing ones!

If you need to take any disciplinary action, or to assign the professor to a different course, be sure to thoroughly explain the circumstances to the campus public relations office. They're the ones who will have to deal with inquiries from the public and possibly the press, and they'll need to know what they are talking about! You can also decide with them whether any inquiries should be referred to you, and whether, if the press contacts you directly, you should refer the call to them or handle it yourself. It's important to have good communications among everyone who might answer inquiries, so you have a consistent understanding about what's happening and why. Many of the questions that will be directed to you will be in terms of "freedom of speech" or "academic freedom"; an important theme of your answers will be that, like any other freedom, academic freedom must be exercised *responsibly*.

Creationism Outside the Classroom

Free-wheeling discussion of religion and other ideas, in dormitory dining-rooms, campus newspapers, and everywhere

NEWS

else, is a recognized feature of campus life. Answering creationist claims in these contexts follows the same pattern as in any other community: People have a right to express their opinions, but not to have them go unchallenged—especially not in a campus community! Be sure to answer any published creationist claims in campus or local newspapers, and speak up in campus conversations. You will be much more effective if you follow the rules of good debate and, instead of questioning your opponents' intelligence, answer with the facts. Besides understanding the scientific issues, be sure you understand issues of church/state separation. No matter how "unfair" some people say it is, instruction supported by public money cannot be used to promote religious positions like creationism; First Amendment restrictions on "establishment of religion," as well as many state constitutions and laws, forbid

public funding of religious advocacy.

A new factor on many campuses is the efforts of some professors with strong religious commitments to give religion a more explicit, assertive position on campus. For example, the May 4 issue of *The Chronicle of Higher Education* reports in "Devout Professors on the Offensive" that many academics are taking out advertisements in campus newspapers, or making a point of mentioning their religious perspectives when they introduce themselves to their classes. Some professors engaged in these activities belong to the Faculty Christian Fellowship, a branch of Campus Crusade for Christ.

The issue of a professor's mentioning personal religious affiliations is complicated and controversial. Many professors comment that while this might represent some sort of "truth in advertising" in, say, a compara-

tive religion or philosophy course, it's hard to see what relevance a professor's religious affiliation has to a chemistry or statistics course. But stating religious affiliations raises additional concerns about the possibility of seeming coercive. It is worthwhile for supporters of evolution, like anyone who cares about education, to take part in these campus controversies. It's also important *not* to jump to conclusions about the other beliefs of religious activists. For example, at Ohio State University, some members of the Faculty Christian Fellowship advocate teaching creationism, and others teach the theory of evolution without any qualms, even pointing out that scientific creationists "aren't very scientific." In the long run, understanding and maintaining diversity of opinion on campus can sharpen everyone's understanding of the issues and help assure the integrity and quality of science education. ❖

Creationist Gov Candidate Defeated in Minnesota

John Cole

Minnesota Republican voters repudiated the primary election campaign of Allen Quist, endorsed by the state GOP and the religious right. Sitting Republican governor Arne Carlson gained a lopsided (66%-33%) victory against the party-endorsed avowed creationist in the September election and will face a Democratic challenger in November.

Quist supporters had dominated the state Republican convention last spring, nominating the con-

servative farmer and state legislator rather than their own party's current governor. Carlson had angered many religious conservatives by endorsing or more accurately refusing to oppose abortion rights as defined by *Roe v. Wade* and refusing to attack "gay rights" proponents. Quist called for teaching creationism in public schools and was famous for his marathon legislative attacks on pornography and his statement that men had a genetic predisposition to head families.

Minnesota turned into a good example of what some liberal critics

have argued—that cultural and religious conservatives are better at grass roots organizing for local or party elections than at convincing a majority of the larger public to vote for them. On the other hand, observers agreed that Quist was a fairly unsophisticated candidate.

Campaign and Elections (September 1994) has published the results of their survey of state political party leaders. Eighteen states reported that Religious Right activists controlled their Republican Parties, and 13 states' GOPs were said to be strongly influenced. ❖

❖
18+ state
party take-
overs
❖

South Africa Legalizes, Re-Bans Evolution Teaching

John Cole

Under the old Nationalist Party, the architect and enforcer of apartheid, South Africans could not be taught about evolution, at least legally. Whites, especially, were considered direct descendants of Adam and Eve. (There are racist old books which suggest that black Africans are an evolved descendant of lemurs, while "humans" aka whites, descended from Adam and Eve!) But then, with the election of president Mandela and the African National Congress, the Department of Na-

tional Education decreed that evolution will be introduced into the public schools. Or at least education policymaker Eddie Botha said the future biology curriculum would include Darwin in the form of "a theory of development."

However, no sooner than Botha spoke, his superiors dismissed his comments as mere "speculation," according to Ellen Bartlett, writing in the *Boston Globe* (7/18/94). National Party holdovers in the education ministry seem intent on staving off the inevitable via a study com-

mission to examine the matter, to the chagrin of South African scientists such as Philip Tobias, a world authority on human evolution and a professor at the University of Witwatersrand. "Today nothing in the whole realm of biology and anthropology makes any sense other than seen in the light of evolution," he said.

Gill Mudditt, a biology teacher at a church-run school, said "We do not want free drugs and free sex. We do not want an increase in the divorce rate. Evolution is just a part of that." ❖

Evolution ⇐ p. 3

tem). The *Forum* which evaluates and endorses judicial candidates, makes a claim that sounds very high-minded: "Evaluations are not based upon the criteria used by political action committees or the editorial boards of the newspapers." Yet the issues discussed are highly political, including sex education, domestic partnership ordinances and... you guessed it!... "Evolution vs. Creationism." Goodloe, who doesn't say whether candidates Richard Guy, Jerry L. Alexander, Jeannette Burrage, and Ronald E. Cox agree with him, approvingly quotes U.S. Supreme Court Justice Scalia's dissent in *Edwards v. Aguillard*: "The body of scientific evidence supporting creation science is as strong as that supporting evolution. . . . [It] is merely a scientific theory or guess. It is a very bad guess at that. . . ."

Kenneth Rasch, the Fort Dodge, Ia., president of the national *Land and*

Water: The Magazine of Natural Resource Management and Restoration, editorialized in June about the US being a Christian nation which needs to get God back into the schools.

These examples are just the tip of the proverbial iceberg; the evolution/creation issue, openly or covertly, is going to be part of many state and local elections this year. We encourage NCSE members, first of all, to bring candidates' views into the open. A candidate's support for creationism may be obscured by her own or her supporters' advocacy of some attractive principle like tax limits or reducing "judicial activism." Sometimes there's an information gap simply because *nobody asks*. If you belong to a group that submits candidate questionnaires, or attend candidates nights, make sure somebody asks, "What do you think

should be the place of evolution and creationism in public education?" Notice how open ended this question is, and ask a similar open-end question; to answer, a candidate has to tell you what he thinks! Once it is revealed what candidates think, beyond their bumper stickers, voters know better know whom to support.

True, science isn't democratic—but defending (or attacking) good science education is very much a part of our democratic process. Most of the attack on science education and other issues is coming from people who have organized well at the grassroots level and turned out more votes than the opposition. This is all quite legal and fair; even "stealth" candidates who do not reveal their full agendas are no monopoly of the religious right. In this election year, thoughtful, informed votes can be the best defense of evolution. ❖

❖
Justice
Scalia:
creation
science is as
good as
evolution
❖

NEWS

Putting the Squeeze on *Lemon*

Molleen Matsumura

Since 1971, Supreme Court decisions on the evolution-creation controversy and other church-state separation issues usually have applied a test derived from *Lemon v. Kurtzman*. In this case, the Court ruled that, to be constitutional, a law must satisfy three criteria: 1) it should have a secular purpose; 2) it should not have the effect of advancing religion; and 3) it must not cause entanglement between government and religion. The 3 points are often referred to as the "3 prongs" of *Lemon*. The "purpose prong" of the *Lemon* test was the basis of the 1987 decision in *Edwards v. Aguillard*, which over-turned a Louisiana law requiring the teaching of creationism...and all other creationism cases since 1971: *McLean v. Arkansas*, *Webster v. New Lennox*, *Peloza v. San Juan Capistrano*, and the case over the posting of the 10 Commandments in school rooms, *Stone v. Graham*. As described in *NCSE Reports* (11(4):p.6), in a sharp dissent to *Edwards*, Justice Scalia announced his desire to abandon the "purpose prong," arguing "*Lemon's* purpose test—a test which exacerbates the tension between the Free Exercise and Establishment clauses, has no basis in the language or history of the amendment. . . ." And Scalia isn't alone in his opposition to *Lemon*.

The Court's most recent opportunity to revise or abandon the *Lemon* decision was the Kiryas Joel case. The New York state

legislature had created a special school district for children in Kiryas Joel Village, a municipality which is also the religious enclave of the Satmar Hasidim, an Orthodox Jewish sect. This district was created specifically to serve disabled children residing in Kiryas Joel, so that they could receive special services provided by the surrounding public school district, without attending public schools with non-Hasidic children. The New York State School Boards association challenged this legislation (they were joined by other organizations, including PEARL—the Coalition for Public Education and Religious Liberty, of which NCSE is a

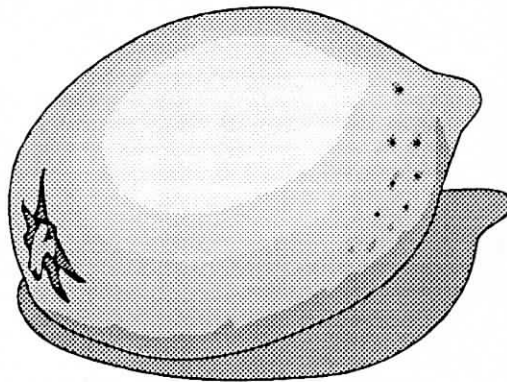
limiting government ability to accommodate the religious needs of students. Justice's Rehnquist and Thomas joined in the dissent by Justice Scalia, which labelled the majority decision "astounding." Thus five Justices—a majority—are clearly willing to modify or abandon current law as soon as an appropriate case gives them an opportunity.

What will it mean for evolution education if *Lemon* is squeezed out? The details would depend on the exact terms of a new Supreme Court doctrine. At the very least, we could expect new grass-roots challenges as the ap-

plication of the new law is tested. Once one school district had been convinced that including creationism or excluding evolution is constitutional, there would be imitators everywhere. Experience shows that creationists don't wait while early cases work their way through the courts. Evolution's defenders would need to develop new constitutional arguments, and work harder than ever to help the

public understand why teaching evolution is crucial to good science education.

NCSE will track developments in First Amendment law and keep members informed. Meanwhile, we still have plenty of work to do reminding educators and the public that under current law, it is unconstitutional to teach creationism, since it is a religious doctrine.



member), and both the New York Court of Appeals and the U. S. Supreme Court found it unconstitutional.

However, analysis of the six opinions written in this case reveals mounting pressure to weaken the *Lemon* test. The concurring decisions of Justices O'Connor and Kennedy expressed concern that rulings in *Lemon v. Kurtzman* and subsequent cases had gone too far in

❖
3 prongs
—legislative
purpose,
effect, and
entanglement
of church and
state
❖

RESOURCES

Books

	LIST	MEMBERS		LIST	MEMBERS
Berra, <i>Evolution and the Myth of Creationism</i>	8.95	7.00	McGowan, <i>In the Beginning... A Scientist Shows Why the Creationists Are Wrong</i>	18.95	15.25
NEW Bowlby, <i>Charles Darwin: A New Life</i>	14.95	11.95	McIver, <i>Anti-Evolution, An Annotated Bibliography</i>	15.95	12.75
Bowler, <i>The Non-Darwinian Revolution</i>	12.95	10.35	McKown, <i>The Mythmaker's Magic</i>	23.95	19.15
Cartmill, <i>A View to a Death in the Morning</i>	*29.95	23.95	Moore, <i>Science as a Way of Knowing: The Foundations of Modern Biology</i>	32.50	26.00
Clark, <i>Evolution and Cultural Literacy</i>	7.00	5.60	NEW Moreland, ed., <i>The Creation Hypothesis</i>	12.99	10.50
NEW Dalrymple, <i>The Age of the Earth</i>	24.95	19.95	Newell, <i>Creation and Evolution: Myth or Reality?</i>	12.95	10.35
Dawkins, <i>The Blind Watchmaker</i>	10.95	9.50	Numbers, <i>The Creationists</i>	*27.00	21.50
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
Desmond & Moore, <i>Darwin. The Life of a Tormented Evolutionist</i>	*34.00	27.25	Raup, <i>Extinction: Bad Genes or Bad Luck?</i>	*19.95	15.95
Dietz & Holden, <i>Creation/Evolution Satiricon</i>	12.95	10.25	Robinson & Tiger, eds. <i>Man and Beast Revisited</i>	16.95	13.55
Diamond, <i>The Third Chimpanzee</i>	13.00	10.40	Ruse, <i>But is it Science?</i>	*29.99	23.95
Ecker, <i>Evolutionary Tales</i>	10.00	8.00	Sagan & Druyan, <i>Shadows of Forgotten Ancestors</i>	*23.00	18.00
Eldredge, <i>The Miner's Canary</i>	20.00	16.00	Strahler, <i>Science and Earth History, the Evolution/Creation Controversy</i>	*48.95	39.15
Eve and Harrold, <i>The Creationist Movement in Modern America</i>	13.95	11.15	Strahler, <i>Understanding Science</i>	*26.95	21.55
Godfrey, <i>Scientists Confront Creationism</i>	10.95	9.50	NEW Tourney, <i>God's Own Scientists</i>	15.00	12.00
NEW Goldsmith, <i>The Biological Roots of Human Nature</i>	16.95	13.50	Van Till, Young, & Menninga, <i>Science Held Hostage</i>	10.99	8.75
Gould, <i>Bully for Brontosaurus</i>	10.95	8.75	NEW Webb, <i>The Evolution Controversy in America</i>	*34.95	28.00
Gould, <i>Ever Since Darwin: The Panda's Thumb</i> (2 bks, each:)	9.95	7.99	NEW Weiner, <i>The Beak of the Finch: The Story of Evolution in Our Times</i>	*25.00	20.00
Gould, <i>Hen's Teeth and Horse's Toes</i>	6.95	5.55	NEW Wilson, <i>The Diversity of Life</i>	14.95	11.95
Gould, <i>Flamingo's Smile; Wonderful Life; 8 Little Piggies</i> (3 bks, each:)	10.95	8.75			
Gross & Levitt, <i>Higher Superstition</i>	25.95	23.95			
Harrold & Eve, <i>Cult Archaeology and Creationism</i>	*24.95	19.95			
NEW Holton, <i>Nonscience and Anti-science</i>	*30.00	24.00			
Howells, <i>Getting Here</i>	19.95	15.95			
NEW Kauffman, <i>The Origins of Order</i>	*29.95	23.95			
Larson, <i>Trial and Error</i>	9.95	7.95			
Lewin, <i>In the Age of Mankind</i>	19.95	15.95			
Lewin, <i>The Thread of Life</i>	19.95	15.95			
Maynard Smith, <i>Did Darwin Get it Right?</i>	*25.00	20.00			
Mayr, <i>One Long Argument: Charles Darwin and the Genesis of Evolutionary Thought</i>	10.95	8.75			
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
Stein, <i>The Evolution Book</i>	12.95	10.35
Stein, <i>The Science Book</i>	9.95	7.95
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with increasing complexity!**

RESOURCES

New Creationist Book Enroute

Arthur M. Shapiro
Professor of Evolution and
Ecology, Center for
Population Biology
Univ. of California at Davis

❖
A
well-crafted
terrible book
❖

A preview of *The Facts of Life: Shattering the Myths of Darwinism* by Richard Milton. Hardcover edition published by fourth Estate, 264 pp. ISBN 1-85702-027-8, 1992. Paperback edition published by Corgi Books, 334 pp., ISBN 0-552-14121-6, 1993. Not yet released in USA (as of July 10, 1994).

As I write this, astronomers are waiting for the fragments of an errant comet to slam into the back side of the planet Jupiter. No one is quite sure what will happen, but by the time you read this you will know. Also at this writing, another destructive object is hurtling toward a rendezvous with destiny. The object is a major anti-evolution book called *The Facts of Life* (hereafter TFOL) and its target is the United States, where it is to be released sometime this year. We have a foretaste of what TFOL will do here, based on its reception in Britain, where it came out nearly two years ago—keeping in mind that the “evolution protest movement” in Britain is a pallid reflection of the one here. The lesson is: prepare to gird thy loins.

The *Sunday Times* (of London) gave TFOL serious coverage at its debut in August 1992, triggering shock waves in the evolutionary “establishment.” In no time at all Richard Dawkins had published a savage put-down in the *New Statesman*. Headlined “Fossil

Fool,” it makes for delightful, self-satisfied reading for its smug wit—and it pleased the publisher’s flacks no end. The 1993 paperback edition proudly quoted Dawkins: “Perhaps this unqualified hack is a solitary genius, the only soldier in the entire platoon—nay, regiment—who is in step?” (This is akin to an ad for the cult film *Night of the Living Dead* quoting Pauline Kael as calling it “The best movie ever made,” conveniently omitting the last two words of the sentence—“in Pittsburgh.”)

❖
Much better
anti-evolutionism
than
Phillip Johnson’s!
❖

Apparently few people in this country have yet heard of TFOL. I met it through an ad in *Nexus New Times*, a magazine transplanted to our shores from Down Under. *NNT* caters to the *In Search Of* and *X Files* crowd. Its specialty is offbeat stories and conspiracy theories. It has no interest in consistency and has no party line except that all conventional wisdom is inherently suspect; it prints wild rumors about AIDS, the “truth” about alien cadavers in U.S. Government deep freezes, etc., and it consistently demonstrates the capacity of paranoid logic to dialecticize any-and everything. The ad offered the British edition by mail.

I wrote and said I would review the book in an American venue if they would send me a freebie. I wouldn’t guarantee the tone of the review. They bit. That’s how I came to have perhaps the only copy of TFOL in American academic hands.

TFOL is a well-crafted terrible book. It repeats most of the same stuff in, say, *Darwin on Trial* by Phillip Johnson, but what a difference in tone! Author Richard Milton (I assume there really is a Richard Milton, but I’m not absolutely sure) applies a vivid muckraking style to “Darwinism,” or rather a caricature of same. Moon dust and improbability are there; problems with radioactive dating methods are prominently showcased; “missing links” simply do not exist, blah, blah. But all is presented in a winningly, vibrantly pugnacious style predisposed to infiltrating cocktail-party conversation; I can hear it already:

Did you know there are *still* no fossil intermediates between men and apes, after all these years? All this ‘Lucy’ stuff sounds good, but actually every fossil found so far is either a man or an ape—there *are* no intermediates. you should read this book *The Facts of Life*. I heard about it on Rush Limbaugh . . .

Until TFOL hits the mass market, *Nexus New Times* is a telling vehicle for advertising it. It has deep appeal to the knee-jerk contrarian mentality, the conspiracy theorist, the cultist, the crank. The trouble is that there is a bit of that mentality in so many of us, a

RESOURCES

point Richard Hofstadter made years ago in *The Paranoid Style in American Politics*. Seemingly, only a paranoid would buy Milton's assertion that physicists, geologists, chemists, geneticists, paleontologists, and anthropologists are nearly all scoundrels, dupes, fools or liars, held in thrall to errors so basic, so *obvious*, that any idiot can see them once someone like Milton merely *points them out*. Either the scientists are guilty of cupidity, stupidity, malice and arrogance, or Richard Milton is. As a *gifted* hack, Milton is able to convince many readers that he is not the boob.

"Arrogance" is the linchpin of his argument. Scientists, he says, are arrogant; they view the laity with contempt. Thus, in the paperback edition, he reviews his treatment by Dawkins et al. and uses it to bolster his case—that scientists will not listen to truth if it comes from outside their elite caste. His line, received well in Britain, will be received even better in the United States, with its persistent strain of political anti-intellectualism (populism, anti-elitism). All the better for it that it is delivered in a no-holds-barred style that smacks of an exposé of political corruption.

Milton, as it happens, is unqualified. Not by virtue of his résumé—whatever it might be—but of his frequent and serious howlers, which will be unnoticed by the laity but clearly inspired Dawkins' hearty contempt. On pp. 214-215 of the paperback edition I hold, he argues that DNA sequencing will be no more useful than morphology for distinguishing between homology and convergence, because "presumably the DNA sequences for those wings [of birds, bats and flying reptiles] will have at least

some instructions in common." On p. 157, Milton declares that industrial melanism, "far from being an example of evolution or even natural selection . . . is an example of a shift in population." Huh? "The same thing would happen in human terms if some disease were to kill off the white race, but left the black race unharmed." Oh. Certainly industrial melanism could not be used "to explain Darwinian evolution, which is trans-specific." Gee, I had missed that fine point . . .

As usual, to answer all the errors and misrepresentations adequately would require a book at least as long as Milton's. And failure to answer them all is, of course, tantamount to either cowardice or inability to do so, since Milton is surely right. Personally, I would love to see Milton get rich on the royalties that would result were his book made mandatory for all prospective science teachers in this country. I would like to see each of them have to research and write a detailed critique of at least one chapter—any chapter—of this book. Milton claims to advocate critical thinking as the cure for the intellectual sloth that allows Darwinism to persist despite all its pillars having been demolished decades ago. What's sauce for the goose . . .

Milton is not a creationist. He has, he says, no particular axe to grind—except intellectual honesty. He does hint that he can see dimly what will ultimately replace Darwinism as the prevailing theory of evolution. It seems to be a diffuse amalgam of formative causation (epimorphic fields) and neo-Lamarckism. He is wise enough to leave this part of his book very vague, so he can appear both moderate and self-effacing.

The paperback version ends with a political coda. Most academic research is funded by the taxpayer, says Milton, and we as taxpayers are entitled to quality control. The research establishment, he says—hasn't he demonstrated thus?—is thoroughly corrupt, practicing careerism by squelching innovation, wrapping itself in moribund fallacies rather like the rulers of the former Soviet Union did, trying desperately to preserve its perks even while knowing in its heart of hearts that it has failed utterly. The public, he says, is way ahead of the establishment. The public, with his guidance, knows that Darwinism is dead. The public will no longer allow its tax dollars to support this corrupt charade.

Think about how you would answer these arguments.

You will have to.

North West Creationist Sentinel

The *NWCS Newsletter* issue Number 1, Winter 1994, features five pages on "What Was the Behemoth?" and dinosaurs in creationism. The other five pages analyze an appearance by Stephen Jay Gould in Seattle.

Edited by Bryan Robles for teachers and the general public, this quarterly is \$5.00 per year at NWCS, 12320 SE 197th Pl., Renton, WA 98058. Robles writes as a former creationist who was persuaded by evolutionists' arguments, especially an article by David Milne which he says first got him to question creationism.

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calculating
anti-
evolutionism
that
"smacks of
an exposé
of political
corruption."



RESOURCES

Listing items here or offering to distribute them does not imply NCSE endorsement; annotations are by the editor or various contributors.

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*Finally available
for sale!*
**The Institute
for Pi**

Video satire on the "science" practiced by the infamous Institute for Pi Research, dedicated to proving the truth of the Biblical dictum, $\pi = 3.0$. Long an underground classic. 25 minute videotape (1981; rediscovered!).

NCSE NEWS

Network News: The Human Evolution Education Network

Molleen Matsumura

The *Human Evolution Education Network (HEEN)* is a partnership of anthropologists and elementary and secondary school teachers. Anthropologists conduct workshops for teachers to familiarize them with concepts and curriculum materials on human evolution. They may also arrange to help with curriculum enrichment by visiting classrooms or conducting museum tours. *Missing Link*, the HEEN newsletter, is the medium for scientists to describe their experiences in working with public school teachers and students, and pass along the ideas that have worked for them. *Missing Link* is currently a free publication, underwritten by the MacArthur Foundation.

What you can do: Physical and cultural anthropologists, please send us your name, address, phone number and e-mail address, and a brief description of how you would like to work with schools, so we can match you with local teachers and school districts. Let us know whether you'd like to subscribe to *Missing Link*; better yet, send us articles for *Missing Link*. We hope you'll subscribe even if you don't have time to participate in other ways; maybe reading it will inspire you in the future! (Remember, it's free!)

Teachers, send us your name, address, grade level you teach, phone and e-mail, so we can match you with local scientists. Tell us the kind of assistance you

need. We are also very interested to hear the kinds of questions and problems you have when you teach human evolution. We'd like to share this information with participating anthropologists in their newsletter, *Missing Link*.



Don't be
a missing link!



Parents, tell teachers in your children's schools about HEEN so they can use our resources to give your kids the education you want them to have.

Another NCSE project you may want to hear about is the *Pre-Publication Review Project* which links scientists with textbook publishers. Textbook publishers maintain access to educators who evaluate their

texts for readability, interest, and other factors to determine how helpful they really are in teaching. But what about the *accuracy* of the texts? This is where NCSE comes in. We are adding to a data-base of scientists in all disciplines who can be matched with publishers seeking scientific reviews of textbooks. *What you can do:* Volunteer for our data-base! Make sure to tell us your field, so we don't match geologists with publishers of biology textbooks!

People interested in the HEEN project should write to the attention of "HEEN" or Molleen Matsumura. People volunteering for the Pre-Publication Review Project should write to the attention of Madeleine Clarke. Everyone at NCSE is very excited about both projects. It is a delight to be furthering evolution education in constructive ways, not just putting out creationist brush-fires. Join the fun! ❖

Stan Weinberg Honored by AAAS

Stan Weinberg was elected a Fellow of the American Association for the Advancement of Science at its Spring 1994 meeting. As most readers know, Stan founded the "Committees of Correspondence" which evolved into the NCSE. Like the pre-Revolutionary War CCs, these were set up to exchange information—this time about the rapidly-flowering "creation

science" movement which was revived in the 1970s. Stan's *Memorandums of the Committees of Correspondence* was the predecessor of the *NCSE Newsletter* (Which then became *Reports*). A retired high school and college teacher and biology textbook author, Stan is now writing a history of the creationist movement and the scientific reactions to it. ❖



CCs
founder



Tracking Those

Opinion: Creationism's Research Experts

David H. Milne
Evergreen State College
Olympia, WA

Lee Greenawalt's recent letter in *California Classroom Science* states that scientists ignore the "research of more than 100 scholars who hold advanced degrees in science . . .," meaning that scientists "dismiss the claims of creationists." [This is a common claim, and it] merits a response.

I'm a biologist. I've made a special effort to study the claims of "creation scientists." I've read most of the works of most of the prominent modern creationists. I've studied *The New Geology* and other early works by the forerunners of modern creationism. I've attended creationist conferences, listened to their presentations of findings, and have heard the staff of the Institute for Creation Research explain their research in detail in a quarter-long graduate course in southern California.

As a result, I've given "creation science" a closer and more objective scrutiny than have 99 per cent of the scientists in the United States, and have studied the claims of "creation scientists" more carefully than have 95 per cent of the people who call themselves creationists. My conclusion is that creationist "research" is a joke.

Most creationist "research" consists of combing science books and articles, looking for quotes or facts that can be used to support the Genesis account of the origin of the Earth and humanity. The creationists who run the movement are committed to the idea that the Earth is only a few thousand years old.

Since virtually no facts suggest those conclusions, creationists are forced to use quotes out of context, and to misrepresent facts to argue their case. They do not intend to inform, or educate, or enlighten anyone.

Their publications are intended to confuse, to create smoke screens, to create doubt about the findings of science. As part of their campaign for doing so, they disregard refutations of their claims and continue to make discredited claims even when they know they have been proved wrong.

There's one sure-fire way to convince yourself that 'creation research' is bunk. And that is to look up the original sources of the quotes and facts that creationists claim support their views. Not just a few of them, a lot of them.

A few misquotes and selectively misrepresented facts can always be brushed off as carelessness or error. It is really necessary to look at a lot of them, to see that there is a pervasive pattern of misrepresentation and self-deception throughout the entire creationist literature, to realize that creation "science" is a barrage of propaganda, a disinformation campaign.

Here's a good place to start. Look up Henry M. Morris's early ICR Paper listing some "118 different measurements that show that the Earth is young." Wow, 118 measurements! Sounds impressive, doesn't it . . . research that other scientists have ignored, maybe the Earth is young, after all?

Now check out every last one of the 118 examples. Some will be

easy. For example, a bunch of them are sea salt residence times in the oceans, falsely presented as estimates of the age of the oceans. Others will be tough. For example, you will have to trace the "helium in the atmosphere" argument right to its source, and then work to understand it.

For some of the other items, the "source" is another creationist publication. You will then have to trace the source of the source. But eventually, you will find that, in every last case, the claim is bogus. Not one of the 118 measurements suggests that the Earth is young. In fact most have nothing to do with the age of the Earth at all.

That's one.

Next, examine Duane Gish's claim that the four-footed *Ichthyostega* of Devonian times is not transitional between fish and amphibians. You'll find that it is such a stunning intermediate in so many details of anatomy (and position in the fossil record) between those two classes that you'll want to tell your students about it. You'll thank Duane for calling it to your attention. And, incidentally, you'll find that his account of it is flatly false and misleading.

That's two. Now continue for another 98, and you will begin to appreciate the depth and breadth of the vast creationist campaign of deception and misrepresentation, one that attacks every aspect of science that bears on evolution and the age of the Earth.

You'll also discover how much work it is to systematically root out their falsehoods.

Incredible Creationists

Individual college students assigned to check out creationist sources almost always find themselves outraged by the deceptions that they uncover, even if they were initially sympathetic to creationism. But on the scale of society as a whole, few people have the time, or the academic preparation, or the library access, to check up on creationist claims.

Because creationists specialize in glib sound bites, play free and easy with the facts, and peddle their line as the only tenable alternative for Christians, it is much easier for them to attract a following than for scientists and educators to convince the public that they are wrong.

Once last point. Yes, there are a few creationist scientists with more integrity than the ones who write the mainstream literature. There are creationists who acknowledge that the evidence shows the Earth really is old, or that complex structures really can form spontaneously in apparent local defiance of the second law of thermodynamics, and the like.

Theirs is an honest search to reconcile unwelcome facts with a world view that requires that humanity was supernaturally created. They admit difficulty, and are prone to self deception, but they would not deliberately mislead anyone.

However, they are irrelevant in the context of modern creationism. Their research in areas in which they are competent (food science, electronics, etc.) has nothing to do with evolution or the Earth and in any case they are not the ones calling the shots; the direction of mod-

ern creationism is set by the charlatans among them.

As an educator, I must say that I see no obvious way to reverse the tide of disinformation that the ICR's (and other creationists') propaganda mills disgorge.

Best wishes, science teachers—we've got a long row to hoe ahead of us.

"More comments on creationism vs. evolution; Opinion," reprinted with permission from California Classroom Science, September 1992 pp B2 and B4. ♦

Dr. Knowzalot Answers Your Questions

Q: Creationists all seem to more or less agree on what is true, and they point out that evolutionists are always disagreeing with each other. Why don't you put up a more solid front if evolution is so "solid?"

A: Active science is always exploring and changing—and, we hope, improving. Any field without active debate is moribund. Almost no scientists argue that evolution did not take place and is still going on, but their is much debate about the mechanisms, the speed, and the specific relationships between various organisms. Scientists have perhaps over-sold the public on their ability to deliver "the truth," leaving people to ask questions like yours when they change their minds! A good scientist is comfortable with uncertainty—even excited by it. A lot of people prefer the comfort of absolute "truths," and the scientific creationists appeal to that instinct with iron-clad, simple, everyone-can-understand-it Truth.

Q: I heard a creationist argue that science can only study what we can see, and since no one saw evolution, it is only a belief and should not be taught as science. Doesn't this make a certain amount of sense?

A: You have never seen an electron, have you? But we can still study them in physics. You can see the path an electron makes when a radioactive element is put in a cloud chamber filled with dry ice fumes—when the element decays, the invisible particle leaves a visible path through the cloud. Astronomy and much of geology rely largely on indirect evidence, but few people question their scientific basis. It's the same with evolution—we can study its effects and the evidence of fossils and genetics, all of which point to common, ancient ancestry. And we can observe evolution happening *today*, despite creationist claims to the contrary. Jon Weiner's book *The Beak of the Finch* (available at discount from NCSE), for example, documents the modern-day evolution of Galapagos Island finches over the past decades.



Keeping Tabs

Creationism Museum

Marghe Covino
Project Tocsin
Sacramento, CA

Nestled unexpectedly in an industrial park fronting a freeway in Santee near San Diego is the 17-year-old Museum of Creation and Earth Science. The large, converted warehouse is the object of devout pilgrimages from tourists and schoolchildren throughout the state; true believers who walk through the gallery listen to guides debunk evolution, extol biblical lore and, thus, explain the origin of the earth.

I set out from Sacramento last winter on my own pilgrimage to the museum—to find out how creationism is taught and what its teachers are really advocating. See, I used to think the aim of creationism was straightforward: to get a new version of evolution (like the earth is less than 10,000 years old) taught in America's classrooms. But a walk through the museum indicated a deeper, even more frightening goal. The aim involves proclaiming the truth of creationist beliefs *globally*, linking the American right-wing with fundamentalist religions from around the world.

Just after entering the museum one comes to a sign on the wall proclaiming that most "other" religions are evolutionary and therefore inferior at best and apostate at worst. Biblical passages are quoted to demand that each visitor decide "where he stands on this vital issue." One sign proclaims, "The Tree of Evolutionism bears only corrupt fruits, Creationism bears good fruits." Following that, one begins the tour, first strolling

through *Genesis* with its bright wall murals of space and planets. There, among other things, is "scientific evidence" debunking the Big Bang theory and, moving on, making the claim that God used 24-hour days during the Creation (no trying to get around it by saying that the term "day" can be interpreted to mean millennium—you must believe the absolute inerrant Word of God). And that's not all. Signs also announce the news that "many top astronomers are abandoning the Big Bang theory." Raised concrete and bright paint outline the earth and the cosmos as we move through the next doorway (flanked by formed concrete trees and artificial greenery) to the Garden of Eden. Much is made over God's directive that man has "dominion" over the earth and its creatures. Indeed, the algae-ridden fish tank, the little finches with scant food and water, the tarantula with none, the mice climbing an endless wheel to escape their cramped, airless cage, the poorly kept lizards and snakes were to prove dominion in no uncertain terms. "The billions of fossils of both men or animals in the rocks of earth speak of sickness and death—not the evolution of life—they must ALL be dated AFTER Adam's fall," a sign proclaims. The Flood exhibit is next, replete with theories about God putting most of the large animals in a "hibernating state," a three-dimensional mural of the inside of the ark; and "space photographs" of the mountainous region around Mt. Ararat where the ark was purported to have landed.

Strobe lighting and water sounds then dumped us out into the Ice Age. A guide intoned to the schoolchildren: "All of that water had to go somewhere, so it prob-

ably was sent into making the glacier in the Ice Age. The dinosaurs were in the ark and when the Ice Age came they were caught in it and that's how come their bones are found in various places, because they were left by the glaciers." The Ice Age room was replete with concrete-formed blue-painted stalactites and chilly temperatures.

Several sets of displays held odd collections that seemed unrelated: monarch butterflies in one cage; elsewhere a melted 45 rpm record, a paintbrush, a rusty hook and a melted lab flask apparently supposed to demonstrate the 2nd Law of Thermodynamics at work. Still another display held a lengthy pictorial discourse on Mount St. Helens and then moved on to the unreliability of radiometric dating. A high-tech plastic sign gave "scientific" instructions like "To determine the geological age of a fossil: Do NOT use depth (where found); do NOT use type of rock; do NOT use radiometric dating; do NOT use stage of evolution, DO use the Word of God."

Cheap knock-off pottery and artifact displays—heavy on the shekels and menorahs, oil lamps and widow's mites—were in the same location with Greek and Egyptian artifacts, human fossils and something called "Post-Flood Man." Still another sign states: "Cave men were not human, but weaker, probably degenerate descendants of those migrating away from the Tower of Babel." Of course, Babel was the hotbed of "evolutionary pantheism, polytheistic idolatry, astrology and occult spiritism." The Egyptian, Sumerian and Greek civilizations were dismissed as

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Keeping Tabs

"man-centered, anti-Christian philosophies." Citing Epicureanism (341-271 BC) and Zeno's Stoicism (336-264 BC) as "opposing Paul's preaching," the Creation Museum blithely ignores the fact that the theories were expounded prior to Paul's existence. Socrates, Plato and Aristotle are dismissed as "atheistic" or "pantheistic." Meanwhile, animism is described as the basis for the religions of "uncivilized tribes" and also the basis for Hindus, Buddhists, Shintoists, Confucianists and Muslims. The Aztecs and Incas came in for more bashing about their behavior—heathenism and human sacrifice—as we moved on to the final display, what the guide called "our wall of infamy." On one side of the hallway were the "Bible-believing scientists," while evolutionists on the other side included Friedrich Nietzsche, Andrew Carnegie, Karl Marx, John D. Rockefeller and Charles Darwin . . . and his grandfather. Nazism, Communism and

racism were listed as "the fruits of evolution."

Very strangely, the final display was called The Decadence of Pre-Columbian Indian Societies. It was the culmination of the tour and featured the opinion of former California Congressman William Dannemeyer (that well-known pre-Columbian scholar) on the justification for killing and enslaving the Indian peoples. It reads: "Homosexuality was quite common in many pre-Columbian Indian societies. Columbus discovered, with disgust and dismay, that both the violent Caribs and relatively peaceful Arawaks practiced sodomy. Cortez also found that sodomy was rampant among Indian tribes in Mexico. The priestly caste of the Cempoallan tribe, for instance, indulged in sodomy and homosexual prostitution was common among the community.

"Due to constant internecine warfare and ecological abuse the Ma-

yan civilization had already collapsed by the time the Spaniards arrived. The residue left of that once-mighty culture was a people that had retreated into abject barbarism. . . . It had become decadent and self-indulgent. The pleasure-obsessed upper classes were sacrificing human beings, indulging in orgies and practicing sodomy without shame. The shocked Spaniards put the Mayans' leaders to the sword."

It is sad to see the ICR indulge in this sort of blatant racism.

Over 27,000 visitors have been through the museum during the past year. I urge you to go experience it for yourselves. Look. See the past and project the creationist future. It's mind-blowing. It's free . . . and worth every penny.

[Reprinted with modifications from *Sacramento News and Review*, 3/24/94]

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ICR:
Native
Americans'
slaughter
was
justified
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Creationist Fundraising Phenom

John Cole

According to the November *Nonprofit Times*, in its annual list of top 100 fundraisers, #42 on the list is "Focus on the Family," the creationist evangelical organization led by Dr. James C. Dobson. Last year they were not even ranked. Their contributions totalled \$68,894,869 this year.

Dobson, a televangelist, has been a frequent speaker at "scientific" creationist meetings and frequent "scientific" creationism advocate in his television and personal appearances. He has led numerous

"crusades" against evolution education, and this is a major part of his newsletters and mass mail campaigns.

Also new to the rankings was "Campus Crusade for Christ," #21 with \$147,904,000 in income. Campus Crusade has wandered in and out of the creationist camp, seldom making "scientific" creationism a big part of its crusade.

The 65th largest fundraiser, "The Navigators" of Colorado Springs, CO raised \$46,630,000. It has been a very low profile, high-intensity evangelical col-

lege campus ministry often associated with rigid fundamentalist views, but, like Campus Crusade, it has kept a low profile on the creationism cause. Last year they ranked 79th.

NCSE did not, alas, make the top 100 list, because of a picky accounting detail—we only received a few thousand dollars, welcome and useful as they were, not the millions received by some of the opposition! Individual contributions and some small grants from foundations for specific projects, plus subscription/memberships, keep NCSE going. ❖

Keeping Tabs

Is This the World History Schools Should Teach?

John Cole

est level: Preschool-Adult. 88 pp.
\$14.95.

The following excerpts are reprinted from the 1993 ICR Christmas book catalogue which invited people to reprint items.

"Cave Men" and the Bible
(from preface, *Life in the Great Ice Age*)

Many people are confused about what "cave men" have to do with the Bible. Where do they fit? Or do they belong at all? They are the descendants of Noah's sons, Ham, Shem and Japheth. After God confused languages at the tower of Babel, the people spread out all over the world (*Genesis* 11:1-9). . . . They were the de-

affected by the cold, dark climate of the world after the Flood.

In our story, the Beetle Brows are Neanderthals. . . . Jabeth's tribe are the people we call Cro-Magnon. . . . The entire world could easily have been populated in a few hundred years. It did not take millions of years, as many believe. [Some peoples continued to live as uncivilized hunter-gatherers into modern times, reflecting the earlier diffusion from the Tower of Babel, but most did not.]

❖
The entire world could easily have been populated in a few hundred years.

Where Did Cain Get His Wife?

The Bible teaches clearly that all human beings are descendants of Adam and Eve—thus there had to be intermarriage between brother and sister. There would have been no risk of this causing harmful deformities in the offspring, because mutations (accidental changes in the heredity information) need time to occur and accumulate in a population. Thus the first few generations would have inherited perfect or near-perfect genes, largely undamaged by mutations. In the pre-Flood world, harmful radiation from the sun and other cosmic sources was considerably more filtered than it is in the post-Flood world. Increased radiation and depletion of oxygen in the atmosphere (subsequent to the lowering of the atmospheric pressure) may have contributed greatly to man's degeneration.

Christian Answers to Jurassic Park

Journey into the exciting world of dinosaurs! Are there dinosaurs in the Bible? What do dinosaurs have to do with Noah's Flood and the Ice Age? What were the Dinosaur Wars? . . . What do dinosaurs and beetles have in common with fire-breathing dragons? . . . *Dinosaurs by Design*, by Duane T. Gish; Inter-

intermarriage between brother and sister

scendants of people who built cities, herded livestock, played musical instruments, and made tools of bronze and iron. . . .

After the languages were confused, people who spoke the same language formed into groups. These groups, because they spoke different languages, separated and went in different directions. . . .

One group of people, known as the Neanderthals, were once mistakenly thought by some to be primitive apemen because of their brutish appearance. We now know that they were true men, most likely suffering from rickets and arthritis caused by the world

The above passages give some flavor of what the ICR teaches school children. They are direct quotes of ICR articles and ads which they invite people to quote in whole or in part because they think the arguments are convincing. I hope I am not alone in finding them startling, instead. But if you agree with me, bear in mind that a lot of people are *not* shocked—some are "true believers" already, and others will react that "If it's published it must be true—or at least there must be *something* to it."

Nevertheless, quoting these views and others, which even many anti-evolutionists must feel nervous about, can be useful at a school board meeting where people may be surprised to learn how odd the opposition arguments really are. Can they really defend ideas such as these, or Henry Morris's contention that the craters of the Moon resulted from a battle between angels fighting God under the command of Satan? ❖

Keeping Tabs

Assests Working for NCSE, or, How to Make a Donation Without Spending a Penny

Molleen Matsumura

Have you heard of "Working Assets?" Working Assets is the name of a group of companies that helps customers conduct ordinary financial transactions in a way that benefits selected social causes.

There are two such organizations (they split recently): "Working Assets Common Holdings" are mutual funds that donate a percentage of profits to a number of organiza-

tions selected by shareholders. "Working Assets Visa" and "Working Assets Long Distance" puts a percentage of its profits into a shared pool, again distributing the money among a number of organizations selected by clients. NCSE has been nominated to be a beneficiary of the Working Assets Visa/Long Distance fund. Several organizations are nominated by customers every year.

After screening nominees, Working Assets selects some to be placed on a ballot that is distributed to all customers. If

you already have a Working Assets card or use them as your long distance carrier, please watch for your ballot in the coming months, and if you see NCSE on the ballot, vote for us! We will do our best to alert you if we expect to be on the ballot. If we're voted in, count on it—we'll let all our readers know. It may take some of the pain out of paying your bills if you know a percentage, however small, will find its way to NCSE.

We're still looking for someone who can nominate us as a

beneficiary of Working Assets Common Holdings. If you are a member of this fund, all you'd have to do is suggest NCSE to the fund, and let us know so we can follow up by sending appropriate information. For the bargain price of fifty-eight cents (the postage you needed to send one letter to Working Assets and one to NCSE) you could help fund our work in a big way! (Note: NCSE is not endorsing or co-sponsoring any financial services or receiving a "commission" from their use—just looking forward to contributions!) ❖

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