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Sidney Harris Cartoon Book

Reviewed by John Cole

Sidney Harris is the cartoonist-laureate of science. Some of his cartoons such as the one on this page are so well-known that many people allude to it in professional papers or talks without even having to show it. *Chalk Up Another One: The Best of Sidney Harris*, has just been published by the American Association for the Advancement of Science. 146 8" x 8" pages of cartoons plus a brief forward by AAAS President Leon M. Lederman make this paperback an excellent Holiday gift for the scientist, physician, or science or math teacher on your shopping list. (It costs \$10.95 at bookstores or from the publisher, AAAS Press; add \$4.00 shipping per order from AAAS—and the price for AAAS members is \$8.75 + shipping.)

Some Harris cartoons are a bit esoteric. He assumes readers know a fair

Cartoons, continued on p. 3

Creationists Target Local Offices, Committees

"Stealth Politics"

John Cole

According to Christian Coalition leader Ralph Reed, "The real battles of concern to Christians are in neighborhoods, school boards, city councils and state legislators" (*Wall Street Journal* 5/11/1992).

The new Washington state Republican Party platform calls for "Bible reading, creationism and corporal punishment in the schools," a ban on all abortions, and abolition of the National Endowment for the Arts, according to the *New York Times* (27/10/1992). Also, if Washington state's GOP has its way, the Panama Canal would be reclaimed—along with the gold standard for currency.

A San Diego school board candidates' meeting turned tense and confrontational in 1992 when some candidates' agendas were discussed: school prayer, creationism, library and textbook censorship, and public financing of Christian schools. A new school board member denounced school breakfast programs for poor children because they were an attack on "family values."

In a segment broadcast on the 29 October *MacNeil-Lehrer Report* on PBS, retired entertainer Pat Boone told a California rally that some people get excited about "separation of church and state as if it were in the

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“You folks are doing great!” This is one of the most depressing cheers I hear far too often. We aren’t “*you folks*,” or at least we shouldn’t be.

Perhaps the most common reaction to NCSE I hear is that people are extremely grateful: “Your article on (X) really convinced my schoolboard—It’s really lucky I got a Xerox copy!” This quotation is a composite of a lot of responses, but it’s deadly accurate. I hear a lot about “the good work *you’re* doing” and that publications are being passed around or photocopied for students or school boards or whatever.

We just want and need people to pay for subscriptions and, perhaps, contribute some money to help us answer phones and fire calls. If we’ve helped save your job or helped you improve your kids’ textbooks or schoolrooms, lend *us* a hand! And help us recruit support, since most readers of this tirade are probably members, already!

It’s good news to hear that we have some use. On the other hand, it is depressing as hell to hear that we are taken for granted and don’t need financial support! This applies to contributors of articles, as well—Many of them (you?) submit articles without subscribing. All articles are welcome, because we need information, but it is very frustrating to hear, “Send me copies if you print this, since I don’t subscribe.”

There is no magical reserve of cash tiding us over, no endowment, no kitty available to finance a multi-year project to “go forth and do good.”

To change the topic a bit, before I sound too much like a televangelist: “Evolution” is not on any ballot, to my knowledge. However, as reported in this issue, some states’ Republican parties have been largely taken over by various Religious Right groups such as the Christian Coalition—much to the consternation of most Republicans who are surprised to learn that their party suddenly attacks evolution. Only four Congressional candidates were launched specifically by the Christian Coalition, and all four lost. However, a number of incumbents are strongly supported by the Robertson group.

NCSE is non-partisan and non-political, by definition. It advocates good science education and endorses skeptical, critical analyses of scientific claims as healthy opposites to docile agreement with orthodox details or the assumption that, “If it’s in print it must be true.” We don’t endorse candidates for office.

Meanwhile, “Welcome,” new members! An impressive number of new subscribers join NCSE with this issue, and I hope you (they) feel at home. I hope to hear from you with suggestions, complaints, manuscripts, or whatever. Even applause! The extent of popular antievolutionism may be manipulated by pollsters or the press, but it is a growing phenomenon in the US. We try to keep readers up to date, but we depend upon you for information.

Finally, another note on mailbox issues. Comments on NCSE publications or articles are appreciated and passed on to authors if they can’t be published. Some articles and letters submitted debate theological issues or even attack religion, *per se*, but I should note that these topics are simply not the purview of NCSE.

John Cole

Letters

An Asimov Reply to Creationists

I note in NCSE Reports 12(2) that one of the more unpleasant members of our Australian creationist fraternity, one Ken Ham, chose to gloat over the recent death of Isaac Asimov. A similarly nasty article by Ham also appeared in the "Prayer News" of the organisation to which Ham belongs, the Queensland-based Creation Science Foundation. In the circumstances I feel it only appropriate that Asimov should have the last (appropriate) comment on this issue.

Some years ago I wrote to Dr. Asimov re: the inclusion

of a film clip which showed him explaining the 2nd Law of Thermodynamics. It was in the first of a series of 6 creationist films (Origins Series) shown widely around Australia. As edited into the film the Asimov clip left a clear impression that evolution was against the 2nd Law.

Asimov's reply (13 January 1987) was beautifully succinct:

*"Dear Dr. Ritchie,
I don't think I can fight this profitably at a distance of 10,000 miles. I imagine they've quoted me accurately but out of context and into the wrong context."*

"My satisfaction is that if the afterlife is as I think it is, none of them will go to heaven because it doesn't exist."

"On the other hand, if afterlife is as they think it is then they will go to hell for the sins of lying and hypocrisy."

Dr. Alex Ritchie
Paleontologist,
Australian Museum
Sydney

~

Humanist Fundamentalism?

I really savor your Reports and Creation/Evolution. Keep up

the good work! But, don't neglect the fact that secular humanists, like the late Isaac Asimov, had fundamentalistic prejudices as blatant as the religious fundamentalists'. For many of these people, all religions are false and superstitious. I find many of these people extremely superficial, and Asimov was no exception. When asked on a TV debate on creationism why he did not believe in religion, his profound answer was, "I do not believe in thumbscrews!" Wow!

Joseph D. Ciparick
New York, NY

Stealth *continued from p. 1*

Bible." He held up a Bible and said, "Well, it's not!"

Creationists are targeting school boards, town and county offices and committees, and sometimes more nationally visible offices. Most often, they are doing this via activism in Republican Party politics. Four of their candidates lost 1992 bids for Congress after capturing Republican nominations. According to National Public Radio, of the 600 local candidates sponsored by the Christian Coalition, 40% won in November using a network of precinct captains and local churches.

The Republican Party has been especially targeted by religious conservatives, to the discomfort of Republicans who disagree with their efforts to legislate a particular view of personal faith and morality. The 1992 Republican National Convention reportedly offended many people with its focus on a narrow "family values" definition, and commentators asked, "How could this happen?" But the national production was simply a more visible tip of the iceberg of dogged organizing, volunteering for committees, and doing the other grunt work of politics. More than 300 GOP delegates were reportedly Christian Coalition members.

There are other examples in the news recently—and sometimes out of the news.

Alaska, Iowa, and other states' GOP machinery have also been quietly infiltrated by this new Religious Right. (See related articles on Iowa and Florida, pp. 4 and 5)

The Christian Coalition, televangelist Pat Robertson's self-styled grass-roots organization boasts 350,000 members and 42 state organizations. They coordinate literature and information distribution to another 100 organizations, according to *The Christian Century* magazine (9–16 September 1992). They send a Voter's Guide to 135,000 churches, nationally. In California they recently distributed 500,000 Voter's Guides before the June Republican Primary. Networking with other Religious Right groups, the Coalition helped elect "hundreds of candidates," according to the magazine. For the November election they distributed 50 million voters guides, including 30 million given out in churches around the country.

In San Diego County, the Religious Right elected 60 of 88 members to various local offices in 1990. The victors were part of the "Pro-Family Candidates List." Many won by refusing any public interviews while organizing strenuous get-out-the-vote campaigns in conservative Protestant churches. While Jay

Stealth, continued on p. 17

Cartoons *continued from p. 1*

amount of science and science history. The humor is highly intellectual, and even the well-read scholar may occasionally miss a point or two. Garfield it's not, with punch lines like, "I think, therefore I'm paid" or "My big mistake was going into cosmology for the money."

The cartoons included originally appeared in *American Scientist*, *Wall Street Journal* and various medical journals. □

Textbook Runs Afoul of Cal School Board

Eugenie C. Scott

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“If parents want their children to know about [evolution], they should teach them at home.”
~

Headlines in the *San Bernadino Sun*, 6/21/92, questioned, “Textbook case in ‘dumbing down’?” The good news was that Hesperia, CA, had decided that all 10th graders should take biology. The bad news was that the middle-of-the-road textbook in use, Holt, Rinehart and Winston’s *Modern Biology*, was considered “too difficult,” and a committee of teachers were instructed to select one that would meet the needs of all the students.

The very bad news is that when the teachers did select a textbook, Holt’s *Biology Today*, some school board members vigorously rejected it. Why? The *Victorville Daily Press* reported that some school board members felt the book was inappropriate “because it’s chapter on evolution presents the concept as fact rather than theory” (6/10/92, “Board Rejects Biology Textbook”).

The California Science Framework, the document that directs K-12 curricula in the state, as well as directing publishers on content of their books, clearly states that evolution is a fact as well as a theory. The meaning of the CSF is clear:

Evolution is the central organizing theory of biology and has fundamental importance in other sciences as well. . . . Just as scientists observe the fact that apples fall and devised the theory of gravitation to explain the fall, scientists observe the fact that animals and plants change over time. They constructed the theory of evolution to explain how these changes occurred (p. 22–23). . . . The unifying theory of biology is evolution; as Theodosius Dobzhansky said, noting in biology makes sense without it. It is accepted scientific fact, and has been since the mid-1800’s, that organisms are descended with modification from other organisms. (p. 126)

But not in Hesperia. “Most members of the Hesperia Unified School District Board of Trustees don’t believe evolution correctly explains how there came to be a variety of species on earth.”

“Trustee Lori Nielsen said she could accept no book that mentions evolution. ‘If parents want their children to know about this, they should teach them at home,’ she said.”

Although the *Victorville Daily Press* announced that the book had been rejected, the article was in error. The school board actually ended up approving the offending book, but not because teachers or community members pressed for the inclusion of evolution. Arguments instead were made that the book should be adopted because it had lots of “extras” that teachers sought: Spanish-language tapes, limited-English proficiency materials, and because it was easy to read. □

Update on Lake County, FL

After the September, 1992 primary elections, the headline in the *Orlando Sentinel* cried, “A lot of winners can thank religious right” (9/3/92, p. B1). Of the 27 central Florida candidates running with Religious Right backing, 22 won, including two new members of the Lake County school board, who defeated incumbents. This gives Religious Right candidates a 3–2 majority on the five person board. Newly-elected board member Claudia Ramsey’s plank stated that because “humanism, which she defines as a religion in which humans control their own destiny, is taught in the schools, creationism should get equal time,” reports the *Sentinel*. Citizens of the area are recommended to follow school board meetings closely.

Lake County, FL, was the site of a divisive creationism controversy at the school board level in 1991 (see *Reports* 11(2):1; 11(3):10). At that time, a new school board member, elected with support of local fundamentalist churches, proposed introducing creationism “if evolution were to be taught.” Other school board members voted her down, after lengthy public discussion. Correspondent Glen P. Goffin wrote to bring us up to date on the Florida situation. [ECS]

News

More from South Africa

Tom O'Neill
CASME
Congella, South Africa

I recently came across a copy of *Reports* on our library shelves. I work at the Centre for the Advancement of Science and Math Education, an agency which works towards improving science and math education in disadvantaged schools in our region.

I was enthralled. I had been completely unaware that a serious Creationist menace remained even in the education systems of more affluent countries such as the US. My explanations for how it had lingered on for so long here needed revision. I had presumed that creationism was just one more of the ugly dinosaurs (nineteenth century views on gender issues, sabbath, corporal punishment, etc.) that had managed to survive unnoticed in the enormous shadow of the apartheid monster.

Evolutionary theory is not taught in the schools here. Our present curricula for all racially delineated education departments has been determined primarily by the ruling Afrikaners. Their tradition being a staunchly Calvinist one, it was probably inevitable that unapologetic Creationism (until recently without even the need for a "scientific" dressing) would dominate. Incidentally, the State broadcasting system has been tightly controlled by the same people (to powerful political effect) with the side-effect that [public] access to scientific knowledge was also controlled. Although the views allowed on TV have broadened a little recently, the extent of the mind-set we deal with is indicated by the reputed editing of the word "evolution" from an SABC program dealing with the development of the computer.

Sadly for South Africa, I'm not sure that a broadening of outlook is inevitable with change. While the Calvinists will undoubtedly lose some social power, there are many others who will now argue that evolutionary theory is heresy. Firstly, the great majority of African people here are Christian, and many of the churches with which they are affiliated are fundamentalist. (Fundamentalist and born-again faiths are growing explosively amongst black and white in our current turbulent climate.) Additionally, many less devout Africans are very wary of evolution, foreseeing in it another mechanism by which they can be stripped of their humanity. They

are having enough problems with disclaiming Ham as their progenitor! Add to this the until-now-subdued views of Islamic South Africans whose religious beliefs also [may seem to] require them to vigorously oppose scientific theories of human origins in favour of creationism. □

Creationism Instruction Mandated by Iowa GOP

As reported in the *Los Angeles Times*, the Republican Party of Iowa adopted a platform in 1992 which would require schools to teach "creation science."

Many Iowa Republicans are appalled, according to the *Times*, but this is only one of a number of radical demands made by the new platform after an effective takeover of the party structure by members of Pat Robertson's Christian Coalition. Other goals include abolishing OSHA (the Occupational Safety and Health Administration), capping AIDS education spending and research, ending all gun control, abolishing the National Endowment for the Arts, and reinstating corporal punishment in public schools. Syndicated columnist Molly Ivins reports that a plank calling for the legalization of filing attack dog fangs to sharpen them was defeated, however.

A letter to Iowans from Robertson calls supporters of Iowa's proposed Equal Rights Amendment (on the ballot this Fall) a "socialist, anti-family political movement that encourages women to leave their husbands, kill their children, practice witchcraft, destroy capitalism and become lesbians."

A fair number of Iowa Republicans are ERA supporters, and others who may not be supporters of the ERA support evolution education, and oppose bigotry. They seem to be left out of the Robertson Christian Coalition and state platform equation, and they resent it.

The "Religious Right" is adept at packaging large agendas designed to add diverse constituencies into an apparent monolith. People who embrace one aspect of their agenda may disagree with all or part of the rest of it, yet they find themselves listed as members of a coalition, a "Moral Majority," etc. when they endorse only one corner or another of the platform. In this way, all Biblical literalists are often painted into a corner as implicit supporters of a broad political agenda, even though many are staunch opponents of religious intrusion into government or public schools and perhaps other aspects of the supposed coalition. □

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Televangelist Dobson Slams California Framework— But Promotes NCSE!

Eugenie C. Scott

Televangelist James Dobson publishes a magazine called *Focus on the Family Citizen* (see *Reports* 12(2):18). In the September 21, 1992 issue, staff editors strongly criticize the California Science Framework. "California is leading the charge to silence critics of Darwinian evolution in public school classrooms," trumpets the subhead. Familiar creationist critics (Kelly Segraves, Mark Hartwig, David Llewellyn) are quoted, and disparaging remarks are made about NCSE members Lawrence Lerner, Kevin Padian, and Thomas Jukes.

Segraves is quoted as saying, "The new science framework is now a law that requires evolution to be taught as a fact—and requires Christian students to accept it as such, without any recourse. . . . Now they're going to be tested, graded and judged on how well they accept the 'fact' of evolution." (Actually, the California Science Framework states clearly that the purpose of education is to encourage understanding, not to compel belief. Students who do not accept evolution are free to do so: but they must learn about it if they are going to pass courses in California science classes.)

In attacking the "error-ridden" Framework for having published a table of molecular distances with several errors, *Citizen* editors unwittingly also cast aspersions on creationist scholarship. The table in question, on p. 117 of the Framework, indeed does contain errors. Original data on molecular comparisons had been published by Dayhoff, and portions of the data had been reprinted in the creationist textbook, *Of Pandas and People*. The authors of the Framework deliberately used Dayhoff's data as reproduced in *Pandas* because many teachers had already seen the creationist book, and Framework authors sought to present the data in a familiar form. Kevin Padian, one of the Framework authors, commented, "We thought the creationists could at least copy numbers correctly. I guess they can't."

This is perhaps a lesson for us all: knowing the quality of creationist scholarship, never use them as secondary sources for published data!

In a sidebar on p. 6, readers of *Citizen* are encouraged to write the President of the State Board of Education to protest the Science Framework. "To

find out what's being taught at the classroom level, ask a local school teacher or principal," readers are further admonished. As the goal of the scientific creationists is to rid the schools of evolution, this approach shows great promise. Many teachers have simply ceased teaching evolution at the very hint of controversy, such as when a concerned parent "asks a local school teacher or principal" about the teaching of evolution.

NCSE is recommended in the sidebar as "the best source of information" on anti-creationist activities around the country. They kindly present our address and membership fees, for which we thank them. We've even added a few new members from his "promotion!" □

Should Barbie Dolls Hate Math?

A new version of the famous Barbie Doll talks. Unfortunately, until October, 1992, some of what Mattel, Inc.'s new \$25 "Teen Talk Barbie" had to say was terrible.

"Math class is tough."

The doll has a computer chip which randomly chooses four phrases out of 270, presumably typical of what young teenagers can relate to. Each doll has about a 1.5% chance of including this phrase.

Barbie came out against math in the summer of 1992, and the American Association of University Women and math organizations launched a protest campaign, pointing out that Barbie contributes to a stereotype that girls can't do math. AAUW also noted that the new Barbie could exacerbate the degree to which teachers and schools already typically short-change girls by discouraging their interest in mathematics.

Mattel has agreed to cut Barbie's 270 phrases down to 269, eliminating the offending words. The company also offers a free swap to anyone who wants to exchange a doll purchased before the editing of the chip. Mattel apologized and its spokeswoman added that she was not previously aware of studies showing prejudice against girls in math classes. [JRC]

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Boston AAAS Meeting Focuses on Science and Religion

"Science and Religion: Examining Both" will be a major section of the program at the Annual Meeting of the American Association for the Advancement of Science in Boston, 11–16 February 1993. "What Is Life? Origin and Evolution" is one symposium. That panel will be led by Cyril Ponnampertuma and Lynn Margulis.

"Scientific Resources for a Global Religious Myth" will be chaired by Loyal D. Rue and Ursula Goodenough. "The Religious Significance of Big Bang Cosmology" will be led by theologian and physicist Robert John Russell. "Oil and Water? Institutional Interactions Between Science and Religion" will be chaired by James B. Miller, United Campus Ministry, Pittsburgh.

Other symposia of special interest to NCSE include "The End of Eve? Fossil Evidence from Africa," organized by anthropologist Milford Wolpoff (never a fan of "African Eve!"), "Models of Biocultural Evolution: Understanding Human Social and Moral Development," and "Evolution Medicine: New Directions and Perspectives."

Sessions on "Improving Formal Science Education" will include: "International Comparative Test Scores . . . in Selected Countries;" "History and Philosophy of Science as Aids to Science Teaching;" "Women in Science, Education and Mathematics;" and "Technology for Special Needs on Campus."

A full-day series of symposia on Saturday, 13 February, will focus on science education, including an NCSE session on "The New Antievolutionism" as one of six specialized symposia (see, NCSE at AAAS, p. 8). Related sessions include a plenary session on "Science and Mathematics Education Reform" chaired by Jon D. Miller and symposia on "Project 2061," "Designing a Science Curriculum for Middle School Students," and "Biological Science in the Public Domain," chaired by NCSE Supporter Michael Ruse.

The AAAS Meeting is open to members or others who register and pay the fee; single-day rates are available, as well, and sometimes people attend even if they cannot afford the fees. Members of the press are admitted free if they arrange it in advance. □

Rhode Island Park Buckles to Creationist Pressure

Just one single creationist managed to disrupt the advertising for a 1992 public park exhibit in Rhode Island, as reported by the *Providence Journal-Bulletin* (9 July 1992). Roger Williams Park Zoo hosted a display of animated dinosaur reconstructions this summer (1992). One of the ads for this attraction was a billboard on Route 195 which featured a Pteranodon lurking over the slogan, "Thank God for Evolution." The ad campaign angered creationists, and one of them, Erik P. Thorpe, took the protest to its limits and finally caused the park to paint over the offending text and then the rest of the ad.

Thorpe claimed the billboard was "a slap in the face to every Christian who sees it, and it should be removed immediately, unless that is its purpose." Others objected, too, but Thorpe was the only one who pressed the matter. "I thought that it's blasphemy," he said. The theory of evolution is "filth."

Roger Williams founded the colony of Rhode Island as a haven for people who disagreed with state religion and wanted to live free of state interference with religious beliefs. [JRC]

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~

Barbara McClintock Dies

Barbara McClintock, one of America's preeminent genetics researchers and a Nobel Prize winner, died September 3rd. She was 90 years old and active in research at the time of her death. Dr. James Watson, co-discoverer of DNA, compared the significance of her work with that of Gregor Mendel. She discovered the fluid nature of genetic material nearly forty years before her 1983 Nobel—when she was the first woman to win an unshared prize in Physiology and Medicine.

Born in 1902, Dr. McClintock earned her Ph.D. in 1927 and actively conducted research at Cold Spring Harbor from 1941 until her death. Like scientists of an earlier era, she worked basically alone, without phalanxes of students or post-docs, contrary to modern trends. Her research on transposable DNA fragments was long considered at odds with Darwinian evolution until the advent of molecular biology in the 1970s vindicated her analyses and results. At her death, she was a MacArthur Fellow and the oldest recipient of that honor.

NCSE at AAAS in February

Eugenie C. Scott

On Saturday, February 13, 1993, NCSE will present its symposium, "The New Antievolutionism" at the American Association for the Advancement of Science annual meetings in Boston, MA. The session will consider the "evolution" of scientific and other creationisms since the *Edwards v Aguillard* Supreme Court decision of 1987. Speakers include Dr. William Thwaites, speaking on *Abrupt Appearance Theory*; Kenneth Miller on *Intelligent Design Theory*; Jonathan Marks and Laurie Godfrey, *Non-Darwinism and Anti-Evolution*; Michael Ruse, *Non-literalist anti-evolution: the case of Phillip Johnson*; and Howard Van Till, *Antievolutionism as a reaction to scientism*. We will endeavor to have audiotapes of the session available to NCSE members.

Our symposium is one of the six sessions on issues in science education, the featured "theme" of this AAAS Meeting. □

How Active Should NCSE Be in Other Countries? Should We Subsidize Subscriptions?

Member/Subscribers outside the United States are important to NCSE, but the combination of postal regulations and currency exchange details can make "foreign" membership difficult. Yet our information is needed by educators around the world.

Some obstacles to foreign membership may seem obvious—the expense of even \$28–34 is hard to bear in many countries, for example. Banking rules add to the problem. Most US banks flatly refuse payment in foreign currencies, and others charge incredible fees such as my own bank's \$25+ fee for any Canadian Cheque deposit! A parochial US bank attitude thus adds to the problems faced by NCSE (and any "exporter" on the small scale, for that matter), above and beyond the possibly high cost to a potential low-wage subscriber in another country.

Add to this the high cost of foreign postage (no Bulk Rate, even to Canada or Mexico, and higher First Class and other rates, even surface mail rates). A US letter which costs \$0.29 costs \$0.40 per ounce to Canada or Mexico and \$0.50 per half ounce to other countries.

Creationist missionaries are very active in Third World countries, as is fairly well-known, although

the extent to which explicitly "scientific creationist" missionaries are involved is less well known. In too many countries, antievolutionists are able to stock school and college libraries with "free" books when the thirst for ANY books is often desperate.

In newly independent countries in Eastern Europe, evangelical creationists are extremely active. Long-starved for religious freedom, people welcome all sorts of religious propaganda. We can welcome their religious freedom without conceding the field to "scientific" creationism, I hope, but NCSE and its friends in these countries need help.

We charge "foreign" subscribers \$28 (\$34 for air mail subscriptions), but that is already a subsidized rate. And worse, in many countries, this is an impossibly high cost. In the former Soviet Union, for example, this is almost double the monthly salary of many research scientists. In countries where typing paper (let alone computers or printers or computer paper) is virtually inaccessible, scientific research is incredibly difficult, and this dilemma is most common in Third World countries (countries often richest in the biodiversity so important for evolutionists to study—and facing some of the most pressing problems of habitat devastation and the resultant extinction of species).

In Hungary or Poland or Tanzania or Estonia science education could well be ceded to forces opposed to good science but able to offer schools and libraries "free" textbooks and references. Perhaps we can write off the intellectual input of the vast majority of humanity, but somehow this strikes me as profoundly stupid, ethnocentric and racist—wasteful of human resources and our concomitant ability to affect our planet and perhaps others ones.

Can we target audiences who need us? And if so, how do we pay for it? [JRC]

Welcome New Members

During summer and fall of 1992, NCSE acquired close to 200 new members from the American Association of Physical Anthropologists, the Society for the Study of Evolution, the Paleontological Society, the Society for Vertebrate Paleontology, and the American Society of Naturalists. We welcome these scientists, and look forward to using their expertise to defend the integrity of science education. [ECS]

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Anti-evolutionists are able to stock school and college libraries with "free" books when the thirst for ANY books is often desperate.
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California Textbook League

With foundation support, NCSE published a regular series of textbook reviews. Paid circulation was always low, and with the completion of last year's volume, *Bookwatch Reviews* suspended publication. This decision coincided with the end of a logical cycle of reviews of textbooks currently being used by public schools; new editions are in preparation for adoption in coming years, and NCSE will continue to work with publishers, advising on science content and helping them upgrade their "products." (Modern textbooks are products; many no longer even have authors' names on their covers!)

The California Textbook League, led by prominent textbook critic William J. Bennetta, continues to publish a bulletin dealing with all sorts of textbooks—not just science. For information, write the league at P.O. Box 51, Sausalito, CA 94966. □

Computer Bulletin Board

PHONE NUMBER CORRECTION: To call the NCSE-FREENET computer bulletin board use the number (216) 368-3888. The number published in our last issue was the number used in Cleveland, apparently, but not the "outside" number.

Page Stephens, one of the FREENET poobahs and long-time NCSE-er, has called to alert us to the problem which neither he nor I had checked out when I published Jim Kutz's article in the last issue (*Reports* 12(2)). Stephens reports that callers trying the advertised phone number should, by now, be transferred to the correct one or at least advised of the problem instantly.

Meanwhile, the BBS is up and running, and access via other network system remains the same.

Sorry about any confusion.

Again: The correct phone number is:

(216) 368-3888

Spread the word if you're a computer jockey!

Robert S. Dietz Honored

Eugenie C. Scott

NCSE Supporter Dr. Robert S. Dietz was the recipient of the 1992 Liberal Arts and Sciences Alumni Achievement Award presented by the University of Illinois at Champaign-Urbana. Dietz, a regular contributor to *NCSE Reports*, was honored for his contributions to geology.

To quote the Illinois LAS Fall 1992 newsletter,

Going against dogma, Dietz played a leading role in two of the most important developments in the earth sciences during his lifetime: the establishment of plate tectonics as a new paradigm and the recognition of the importance of meteoric impacts on Earth and on the terrestrial planets. Dietz was the first scientist to propose that the crust of the earth consists of a series of horizontally-moving plates driven by a process of "sea floor spreading" at mid-oceanic ridges. . . . Dietz withstood attacks on a second theory he proposed initially as an undergraduate: that the surface of Earth and other planets are sculptured by meteorite impacts. His later work confirmed the theory, making him the founder of modern astrogeology. . . . One colleague writes of Dietz, "Many of his ideas have been called highly controversial, but as far as I am aware, he has been almost invariably proven right by later works." Another writes, "His hypotheses involving astrolems and other mind-stretching concepts have caused geologists and geophysicists throughout the world to consider their own hypotheses and to consider alternative views as to the origin of many of the major features of our earth."

Congratulations, Bob, on a well-deserved honor. □

Figure on p. 16 is the cover of *The Skeptic* 1(1), © 1992 Pat Linse. The issue includes Asimov tributes by Harlan Ellison, Steve Allen, and Martin Gardner.

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the first
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driven by a
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"sea floor
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at
mid-oceanic
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~

“Where Have All the Creationists Gone? Onto Your Local School Board”—Friedman Speaks at NSTA

Despite a wide-spread public belief that creationism disappeared as a problem when the Supreme Court killed a Louisiana “equal time law” in 1987, the focus has simply changed from state or national legislation to the local level. School boards, local governments, and individual schools and teachers are now the targets. Even local pulpits may be besieged. While NCSE members have kept up to date on this, most scientists and teachers have tended to think the matter settled in favor of evolution—until their own schools or children are targeted.

This is the message Jack Friedman, NCSE co-founder and former president, delivers this Fall at the November national meeting of the National Science Teachers Association and an earlier New York State Science Teachers Association meeting. Friedman says that “People are optimistic. I am. I’d like to think that a bit of concerted effort has solved this problem. But the problem continues, and it is probably even worse now that it’s out of the national media eye.”

Friedman says, “I retired a while ago from high school teaching but not from science education. I’ve worked on the Committees of Correspondence project and the NCSE. It’s crazy to have to speak to people about anti-evolutionism, in 1992. Even worse, a typical audience member will conclude that I’m some sort of nut. But then teachers in the audience stand up and tell me it’s worse than I claim! Other people in the audience are shocked. Then someone stands up to denounce evil evolutionism, and a few more people find out this isn’t the dead issue everyone hopes it is. I wonder what I’ll do when there are no creationists in my audience—I’m getting to count on them to make my point!”

Friedman also attended the Nassau County (NY) Science Supervisors Association Conference “disguised as a vendor in their science materials exhibit area.” All the NCSE materials disappeared quickly. “Next time I’ll bring twice as many,” Friedman says. “Science supervisors on Long Island are beginning to feel the beginnings of creationist pressures, I think.” [JRC]

Because evolution is not a religion, it doesn’t generate the same fervor as creationism does

Scott, Hastings, Godfrey and Cole on the Road

NCSE Executive Director Eugenie Scott chaired a Fall symposium, “Multicultural Approaches to Science: The Good, the Bad, and the Ugly,” at the annual CSICOP Conference. That meeting in Dallas also featured a field trip to the nearby Paluxy Creek area led by Board Member Ronnie Hastings. Hastings and other NCSE-ers have been active in debunking creationist claims to have found human tracks alongside dinosaur footprints along the Paluxy. The dinosaur tracks are real.

In April, Dr. Scott debated Phillip Johnson, author of *Darwin on Trial*, at the Southwest Anthropology Association annual meeting in Berkeley, CA, where NCSE member Jonathan Karpf also spoke. (See next issue for details.) Also that month, She spoke before the Bay Area Skeptics, and in May, at an East Bay Skeptics meeting. June took her to the Pacific Division of the American Association for the Advancement of Science meetings, where she and NCSE member William Thwaites presented a workshop on scientific creationism at the college level. Thwaites, role-playing a creationist professor, delighted (and frustrated) the audience, which was hard-put to cope with his genial, reasonable-sound-

ing arguments for why his academic freedom should permit his teaching of pseudoscience.

July brought Scott to a group of western states science teachers attending an NSF-sponsored short course on coping with creationism in the classroom. In late August, She traveled to Santa Monica College to present the keynote address for the faculty Staff Development Conference, where her presentation was especially well-received.

On September 15, Scott appeared on the Ed Wilson radio show, broadcast from Columbus, Georgia. NCSE member Terrell Stewart managed to call in and asked a good question on this talk show. In October, Scott and two fellow Californian NCSE members presented a three-part workshop to an overflowing room of California Science Teachers Association annual meeting attendees. In November, Scott will present a workshop with Rev. Tom Carson of the United Church for Homeland Ministries at the National Association of Biology Teachers meeting in Denver. Their workshop will discuss, among other things, the role of evolution in liberal theology.

Board member Laurie Godfrey spent much of the summer doing fieldwork on fossil lemurs in the limestone caves of Madagascar. At summer's end, she delivered a paper co-authored with New England Primate Center Director (and NCSE member) Andrew Petto at the International Primatological Society meeting in Strasbourg, France. She was an invited speaker in the Baruch College (CUNY) Globus Seminar Series in New York.

Board Member John Cole was the keynote speaker and a symposium panelist at a special meeting of the Nova Scotia Archaeological Society in Halifax, Canada. He spoke on popular misunderstandings about archaeology and evolution. □

Defective Issues?

Sometimes printing or binding results in defective copies being mailed. We certainly strive to avoid problems, but if they do happen, let us know and we will send a replacement issue.

For example, we've found that C/E 30 was mailed with a number of unintended blank pages to a handful of people; if you were affected, please let us know, if you haven't already, so we can correct the error. However, note that C/E 30 included a couple of blank last-pages because I screwed up as an editor allegedly understanding how print pages relate to manuscript pages. My apologies. However, this is a different matter—defective editing is, alas, not covered in your warrantee, but I promise to keep trying. □

VISA and MasterCard Come to NCSE

NCSE is finalizing arrangements to enable us to receive credit card payments for books, tapes, subscriptions, etc. This should be especially useful to non-US members because it will solve the problem of paying in US-dollars only.

However, some renewal notices and the Fall Book Catalogue do not yet reflect this new service. If you wish to charge your renewal or book order, be sure to indicate the relevant info: Full name, card number, card expiration date—and TYPE of card—Visa or MC, plus your signature.

NCSE And PFAW Cooperate On Textbook Reviews

Eugenie C. Scott

In 1990, NCSE and People for the American Way, the 300,000 member nonpartisan constitutional liberties organization, cooperated in reviewing high school biology textbooks submitted to the state of Texas for adoption. *Biology Textbooks 1990: The New Generation* was published to help Texas teachers and others make informed choices in textbook selection.

In 1992, NCSE and PFAW joined forces again, this time to review 7th and 8th grade science textbooks submitted for adoption in California. Dr. William Thwaites, biology professor at San Diego State University, and NCSE's executive director, Dr. Eugenie C. Scott, reviewed the textbooks and submitted written and oral testimony before the California State Curriculum Commission and the Board of Education during August and September of 1992.

Because of previous controversy over the strong position of evolution in the California Science Framework (see *Reports* 9(6):1, 10(1):10), anti-evolutionist Religious Right organizations such as Lou Sheldon's Traditional Values Coalition, and Robert Simond's Citizens for Excellence in Education, were expected to have a strong showing at the public hearings. The dates of the August hearings corresponded closely to the Republican national convention in Houston, at which members of the religious right prominent. Why Sheldon, Simonds, et al. passed up the September public hearing is not known. Perhaps they felt that they had already lost the battle of evolution in the California Science Framework and will be concentrating their efforts at the local level where choices are made among approved books.

The 34 page NCSE/PFAW report, *Have Junior High Science Books Evolved Since 1985?*, is available through NCSE for \$4.50, including postage. It focuses on whether the instructional programs submitted for adoption cover the nature of science (science as a way of knowing) and evolution accurately and sufficiently. Books varied considerably in their ability to meet the stated criteria, but the authors concluded that these books generally were improved over the books submitted seven years ago. Still, much remains to be done to produce accurate and up-to-date textbooks. □

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Tracking Those

Visiting the ICR Museum

Steven Linke
Molecular Biology
Salk Institute-La Jolla
UC-San Diego

Since I study non-creation science nearby, I visited the Institute for Creation Research August 27th in the San Diego suburb of Santee.

Like any visitor to their building, I encountered the "ICR Museum of Creation and Earth History" which dominates much of the first floor. After receiving a museum pamphlet and a copy of the latest ICR Graduate School catalogue, I proceeded through the museum. The curator was listening to Rush Limbaugh on a radio at the front desk.

Visually, the museum is quite impressive and was quite busy for a Thursday afternoon, I thought. It is laid out roughly according to an ICR view of the order of Creation. The museum's "grand opening" was scheduled for September 18–20 but was already open to visitors. A few highlights follow, beginning at the end of the tour where we find a comparison of the "Creationist Tree" with deep roots and "good fruits" with the "Evolutionist Tree" which has "short roots" and "evil fruits":

Creationist Tree

| Genuine Christianity | Correct Practice |
|----------------------|------------------|
| True Christology | True Science |
| True Evangelism | True History |
| True Missions | True Government |
| True Fellowship | True Americanism |
| True Gospel | True Family Life |
| True Faith | True Education |
| True Morality | True Hope |

Evolutionary Tree

| Harmful Philosophies | Evil Practices |
|----------------------|----------------|
| Communism | Abortion |
| Naziism | Promiscuity |
| Imperialism | Pornography |
| Monopolism | Genocide |
| Humanism | Euthanasia |
| Atheism | Infanticide |
| Amoralism | Chauvinism |
| Scientism | Bestiality |
| Racism | Homosexuality |
| Pantheism | Drug Culture |
| Behaviorism | Child Abuse |
| Materialism | Slavery |

The origins of races was explained elsewhere: "The separate language groups no longer could intermarry freely with the rest of mankind [after the Tower of Babel sin]. As inbreeding and lack of access to the larger gene pool of genes occurred, ethnic characteristics developed. Furthermore, each local environment tended to favor selection of certain traits and eliminate the others. Ethnic characteristics, such as skin color, arose from loss of genetic variability, not from origin of new genes through mutation as suggested by evolution. 'The concept of race is an evolutionary idea.' Scripture teaches that 'God has made of one blood all nations,' Acts 17:26. All humans possess the same color, just different amounts of it. We are all descended from Adam and Noah." [And perhaps some women, too?]

Any questions?

[Based on a report in *BASIS* 11(9): 1–6; see **Resources**]

Creationists and the Millipede

Frank J. Sonleitner
Department of Zoology
University of Oklahoma, Norman, OK

Creationists have argued that many adaptations of the millipede cannot be explained by evolution (E.L. Williams, G.F. Howe, and R.R. White, "A Desert Millipede: Evolution or Design? An Introduction," *Creation Science Quarterly* 28(1): 7–16). But can creationism explain them? Like most other millipedes, the desert millipede has an elaborate defense mechanism of glands opening out in each body segment to emit noxious and poisonous substances. Why should this be, if prior to The Fall there was no death or predation? The authors have no answer. They are also concerned about the Creator designing imperfect defense systems! If the Creator were to give prey 100% efficient organisms of defense, there would be no point in creating predators or parasites which could not survive. Why would an intelligent Creator devise so many things that work at cross purposes to one another?

~
Why would
an
intelligent
Creator
devise so
many things
that work at
cross
purposes to
one another?
~

Incredible Creationists

The authors claim that the Creator designed desert-dwelling fauna and flora—implying that there were deserts in existence prior to Noah's Flood, in direct contradiction to a number of creationist concepts such as global abundance of water, dew, and tropical vegetation in the original creation. The many legs of the millipede are said to be for strength in "bulldozing" burrows needed for hibernation in dry or cold seasons of the year. Were there dry or cold seasons

in the original creation? Finally, they write that this creature is specifically designed to be a "recycler" of dead plant matter in the desert. Again, this seems to contradict the creationist dogma that death did not exist before The Fall.

All of the specific "design" features of the millipede discussed in the *CRSQ* paper are completely at odds with creationist theology. □

Stealth *continued from p. 3*

Grimstead, San Diego County organizer for what he calls the "National Coordinating Council," spoke cheerfully of employing the San Diego model nationwide to elect candidates by stealth, others are turning cautious in public comments.

Ralph Reed, as a leader of Pat Robertson's Christian Coalition, used to speak proudly of waging war "under cover of night" where "you shimmy along on your belly," but today he speaks more cautiously. Reed's allies now seek to avoid publicity while pressing similar tactics. Reed predicts a membership of 700,000 by next year, claiming that President Bush's defeat will wake up people to the need to reclaim America at the grass roots level.

In 1992, they are finding more opposition but using the same tactic. Various "spokesmen," office-holders and candidates refused to speak to *MacNeil-Lehrer* reporters. However, in an audio recording of Steve Baldwin, one of the movement leaders in San Diego, could be heard denouncing both the nationwide influence of witchcraft and the opponents of teaching creationism in public schools.

Are fundamentalist Christian organizations really taking over secular offices like school boards in record numbers, or are they just more visible now? Observers say it may be some of both. Perhaps there are no more "fundamentalists" in office than usual, but they are far more organized and eager to impose their personal views on public policy. The *New York Times* (31/10/92) estimates the number of conservative evangelical Christians in the US to be 23% of the adult population, but historically they have never voted as a bloc, and many disagree with the conservative social agenda. The *New York Times* (5/11/92) reports that 23% of the "White born-again Christians" voted Democratic this year,

compared with 18% in 1988, 22% in 1984, and 33% in 1980.

In 1988, Pat Robertson showed surprising strength in early primary elections, but he faded quickly. It is unclear how extensively his organization has been able to move out of that earlier-defined base of support in *national* politics, but in the less-publicized world of local contests, "stealth politics" has been effective, so far.

Ralph Reed, director of the Christian Coalition, says "It will be union boiler rooms and the black churches versus the evangelicals, and I think . . . there's going to be a lot of surprised faces on election night" (*New York Times* 31/10/92). A full page ad in *USA Today* by another group said that voting for Clinton would be a "sin against God."

Organizations spearheading Religious Right efforts include Pat Robertson's Christian Coalition, Robert Simond's Citizens for Excellence in Education, the Family Research Council, the American Research Council, the Freedom Coalition, and the United Christians of California. There are also allied single-issue organizations such as Operation Rescue and the National Right to Life Committee with often overlapping memberships. □

Phil Ives Dies in Amherst

Dr. Phillip T. Ives, author of seminal papers on *Drosophila* genetics, long-time Amherst College biologist, and NCSE member, died in July 1992. Ives researched fruit fly genetics in the years after World War II when genetics was undergoing a revival of interest with the advent of the "New Synthesis" in evolutionary biology.

~
... waging
war "under
cover of
night"
where "you
shimmy
along on
your belly"

Resources

Listing items here or offering to distribute them does not imply NCSE endorsement or agreement; annotations are by the editor or various contributors. "SASE" = "Self-Addressed Stamped Envelope"

AAAS. 1992. Careers '92: Alternative Paths. *Science* 257:1707-1769, 18 September. Info about post-docs, business careers, non-Ph.D. jobs, grant funding, etc. for scientists; every high school and college counselor should have this on hand to advise students. Available from AAAS, 1333 "H" Street, NW, Washington, DC 20005 for \$1.25+\$1.50 postage (\$0.60 postage for each additional copy).

Anon. 1992. The End of Life's Long Childhood. *The Economist* 325(7780): 103-104, 10 October. Pre-Cambrian paleontology and the origins of animal life. Report on research by Andrew Knoll of Harvard. Available from NCSE for \$0.50+SASE.

Asimov, Isaac. 1992. *Atom: Journey Across the Subatomic Cosmos*. NY: Truman Talley. 319 pp., \$12.00, pb. How finely can a piece of matter be divided? From the Greeks and Romans to today.



Bizzo, N.M.V. 1992. Darwin on Man in the *Origin of Species*: Further Factors Considered. *Journal of the History of Biology* 25(1): 137-147. How did Darwin think natural selection applied to humans? SASE+\$1.25 from NCSE.

Blumenshine, Robert J., and John A. Cavallo. 1992. Scavenging and Human Evolution. *Scientific American* 267(4): 90-96. New research shores up the conclusion that early humans were scavengers rather than big game hunters.

Boyer, Paul. 1992. *When Time Shall Be No More; Prophecy Belief in Modern American Culture*. Cambridge: Harvard University Press. 468pp, illus., \$29.95. The ancient roots of modern religious doomsayers such as Hal Lindsay (*Late, Great Planet Earth*, etc.).

Bratt, James D. 1992. Adam, Eve, and the Christian Reformed Church. *The Christian Century* 9-16 September, pp. 805-808. The history and theology involved in Old Earth vs. Young Earth creationism in the politics of the American "Dutch Reformed" church.

Browne, M.W. 1992. 40-Million-Year-Old Extinct Bee Yields Oldest Genetic Material. *New York*

Times, 25 Sept. Report on technical papers; DNA found in insects preserved in amber.

Bruce, Steve. 1990. Modernity and Fundamentalism: The New Christian Right in America. *The British Journal of Sociology* 41(4): 477ff. Not likely to succeed in the long run, he sez.

Carr, Joseph J. 1992. *The Art of Science; A Practical Guide to Experiments, Observations and Handling Data*. NY(?): HighText. 365 pp., \$19.95, pb. How amateurs can do pro-level science.

Fox, Richard C., G.P. Youzwyshyn, and D.W. Krause. 1992. Post-Jurassic mammal-like reptile from the Paleocene. *Nature* 358:233-235. Follow-up letter from Hans-Dieter Sues *Nature* 239:278 included. Discussion of new fossil Therapsid that hung around until the Cenozoic—if materials are correctly interpreted. SASE+\$1.00 from NCSE.

Freedman, Wendy. 1992. The Expansion Rate and Size of the Universe. *Scientific American* 267(5): 54-60 (November). Present measurements of the Hubble Constant vary by a factor of 2, leaving wide leeway for competing hypotheses about the fate of the Universe; new techniques may change the picture.

Gibbons, Ann. 1992. Mitochondrial Eve: Wounded, But Not Dead Yet. *Science* 257: 873-875 (14 Aug). News about flaws in the original computer runs—basic scenario may still be true re: African origin of modern humans. SASE+\$1.00 from NCSE.

Gleick, James. 1992. *Genius. The Life and Science of Richard Feynman*. NY: Pantheon. 531 pp., \$27.50. Bio of the amazing physicist, biologist, science education reformer and drummer.

Gray, Jane, and William Shear. 1992. Early Life on Land. *American Scientist* 80: 444-456. Minute fossils offer evidence that life invaded the land millions of years earlier than previously thought. SASE+\$1.50 from NCSE.

Hills, Ben. 1992. Ark Enemies. *Good Weekend* (Sydney Morning Herald magazine supplement), 15 August. Cover plus pp.28-31, +3 unnumbered pages about Australian Allen Roberts' Noah's Ark claims and geologist Ian Plimer's debunking efforts.

Resources

Good overview of the flavor of the Australian argument. **SASE+\$1.25 from NCSE.**

Hoeveler, J. David, Jr. 1992. Inside Creationism. Review of *The Creationists*, by R. Numbers. *Science* 258: 487-488, 16 October. Takes us into a surprising, virtually unknown world, the reviewer says. (But not to NCSE!)

Johnson, Phillip E. 1992. The Religion of the Blind Watchmaker. A 2pp. printed ms. reply to Gould review of *Darwin on Trial*. **SASE+\$0.25 from NCSE.**

Johnson, Stephen D., Joseph Tasney, and Ronald Burton. 1989. Pat Robertson: Who Supported His Candidacy for President? *The Journal for the Scientific Study of Religion* 28(4): 387-399. Analysis of polls suggests Robertson's agenda alienated more than it attracted in 1988.

Kristan-Tollmann, Edith, and Alexander Tollman. 1991. The Flood Impact (translation of Der Sintflut-Impakt). *Mitt. Osterr. Geol. Ges.*, 84: 1-63 (5 pp. English abstract). Out of left field, 2 University of Vienna geologists' Vellikovsky-like argument for young Earth and recent memories of Ice Ages, Floods, etc. a few thousand years ago. **Summary available from NCSE for \$2.00 + SASE.**

Lawton, Kim. 1992. The New Face(s) of the Religious Right. *Christianity Today* 20 July, pp. 42-45. Grassroots, school board, and other local fronts, now, and more effective because out of national media spotlight.

Leakey, Richard, and Roger Lewin. 1992. *Origins Reconsidered*. NY: Doubleday. 512 pp., illus. \$25.00. 15 years after their first *Origins* book; half about field research, half about where humans fit into nature.

Levinton, Jeffrey S. 1992. The Big Bang of Animal Evolution. *Scientific American* 267(5): 84-91 (November). Several proposed explanations of the "Cambrian Explosion" ca. 600 mya seem to fall short.

Lewin, Roger. 1992. No Monkey's Uncle. *Book World*, p. 4, 13 September. Full-page review of Ronald L. Numbers' book, *The Creationists* (Knopf).

Linke, Steven. 1992. A Visit to ICR. *BASIS* 11(9): 1-6, September. Detailed description of the ICR's

new Creationism museum. **SASE+\$1.00 from NCSE.**

Livingstone, David N. 1992. Darwinism and Calvinism. The Belfast-Princeton Connection. *ISIS* 83: 408-428. Historical study of diverse reactions to Darwin at two different 19th century Calvinist centers.

Matson, David. 1992. A Short List of Evolutionary Transitional Forms. 12pp, manuscript. Discusses all your favorite intermediates. Good for debating. Includes references. **\$2.00 from NCSE.**

May, Robert M. 1992. How Many Species Inhabit the Earth? *Scientific American* 267(4): 42-48 (October). No one knows, yet urgent policy decisions depend on knowing the answer.

Menendez, Albert J. 1992. The Great Satan of Humanism. *The Humanist* 52(5):18, 36 (September). Brief survey of fundamentalist "Christian school" textbooks. **SASE+\$1.00 from NCSE.**

Menendez, Albert J. 1992. *Visions of Reality; What Fundamentalists Schools Teach*. Buffalo: Prometheus Books. 152 pp., \$14.95. Extended version of the above; by the Americans for Religious Liberty Research Director. Order from ARL, Box 6656, Silver Spring, MD 20916.

Moorhead, James H. 1984. Between Progress and Apocalypse: A Reassessment of Millennialism in American Religious Thought, 1800-1880. *Journal of American History*, December. Old article reference highly rec'd by *Wilson Quarterly*; did prophesy of "end times" really die out or just fade?

Numbers, Ronald L. 1992. *The Creationists*. NY: Alfred Knopf. A detailed history of modern creationism; traces its lineages, obscure and famous, via exhaustive interviews and document searches. **Available from NCSE at discount; see centerfold.**

Preston, Richard. 1992. A Reporter at Large: Crisis in the Hot Zone. *The New Yorker*, 26 October, pp. 58-81. Chilling description of US Army and Centers for Disease Control to identify and control a "break out" of evolving strains of lethal tropical forest viruses with no antidote or cure and a 10% or lower survival rate among infected humans. Human pressures on tropical zones are said to be fomenting emergence of new diseases.

~
Phillip
Johnson
replies to
Gould,
Scott, and
his other
critics.
~

Resources

Purcell, Rosamund Wolff, and Stephen Jay Gould. 1992. *Finders, Keepers; Eight Collectors*. NY: Norton. 157 pp., \$50. More of Purcell's amazing color photos of museum collections and Gould's essays about the pictures. Available through NCSE; call Theresa, 510-843-3393.

Sagan, Carl, and Ann Druyan. 1992. *Shadows of Forgotten Ancestors*. NY: Random House. New book on origins and evolution of life on earth.

Schrock, J. Richard. 1991. Trends and initiatives in science education in Indiana, 1988. *Proceedings of the Indiana Academy of Science* 100:49-64. Good news and bad news about the state of science education in Indiana. One in five teachers favor "equal time" for creationism in science classes. SASE+\$1.25 from NCSE.

Steinfels, Peter. 1992. The Big Bang, and Why Few Theologians View it as a Vindication of Biblical Accounts. *New York Times*, 29 August. Theologians stress that physics isn't religion.

Strahler, Arthur N. 1992. *Understanding Science: An Introduction to Concepts and Issues*. Buffalo: Prometheus Books. 409 pp., \$25.95. See centerfold for special NCSE price.

Taylor, Charles A. 1992. Of Audience, expertise, and authority: the evolving creationism debate. *Quarterly Journal of Speech* 78(3):277-295. "Creationism endures not only in spite of the response of the scientific community, but also, in part, because of it. An analysis of the controversy between 1975 and 1990 indicates that the scientific response to creationism misconstrues both the scientific pretensions of creationism and the relative insularity of scientific decision making on questions of public policy." Available from NCSE for \$2.90

Toumey, Christopher P. 1990. Sectarian Aspects of American Creationism. *International Journal of Moral and Social Studies* 5(2): 116-142. Title describes it. \$3.00 from NCSE.

van den Bergh, Sidney. 1992. The Age and Size of the Universe. *Science* 258: 421-424, 16 October. Highly technical survey of new techniques.

Wilson, E.O. 1992. *The Diversity of Life*. Cambridge: Belknap Press of Harvard University Press. 424 pp., \$29.95. Explores evolutionary

diversity and explains the extent of alarming species and habitat loss, predicting a possible 20% extinction rate in the near future unless governments take drastic action. See centerfold for special NCSE price.

Especially for Teachers

AAAS. 1992. Careers '92: Alternative Paths. *Science* 257:1707-1769, 18 September. Info about post-docs, business careers, non-Ph.D. jobs, grant funding, etc. for scientists; every high school and college counselor should have this on hand to advise students. available from AAAS, 1333 "H" Street, NW, Washington, DC 20005 for \$1.25+\$1.50 postage (\$0.60 postage for each additional copy).

AAAS. 1992. *Sourcebook for Science, Mathematics and Technology Education*. #91-38S from AAAS Books, Box 753, Dept. A55, Waldorf, MD 20604. \$12.95 + \$4.00 shipping. 2500 programs and organizations involved in science education.

BSCS. 1992. *Teaching About the History and Nature of Science and Technology: A Curriculum Framework*. \$3.00 from: Biological Sciences Study Committee, 830 N. Tejon St, Suite 405, Colorado Springs, CO 80903-4720 ("attn:CAT").

Beardsley, Tim. 1992. Teaching Real Science. *Scientific American* 267(4): 98-108. Any revolution in science ed faces an uphill battle amid school budget cuts, textbook "dumbing down," etc. SASE+\$1.25.

EPA Journal is a bimonthly magazine for the general public interested in environmental topics. Departments include "For the Classroom." Order from: Superintendent of Documents, New Orders, PO Box 371954, Pittsburgh, PA 15250-7954; \$10/yr US, \$12.50/yr, other countries.

Science is . . ., published by The Communication Project with Scholastic, is a 515 page compendium of hands-on exploration activities, projects, puzzles, games, and facts for children 6 through 14. \$29.95. Call 1-800-325-6149 in the US, 1-800-325-6149 elsewhere for orders or info.

Keeping Tabs

Johnson vs. Sarich Debate: Did NCSE Get It Wrong?

A Reply

John L. Wiester, Chair,
Committee for Integrity in Science Education
American Scientific Affiliation, Buellton, CA

I read with interest the report by Mary Lou Mendum on the March 4th debate between Berkeley professors Phillip E. Johnson and Vincent Sarich at UC Davis (*Reports* 12(1)). It's a pity that the debate videotape is technically poor, because with the exception of some poorly phrased questions from the audience, the content is excellent. Indeed, it was a pleasure to watch this intelligent interchange between two mutually respectful Berkeley professors. It was refreshing to see light rather than heat shed upon the audience.

My review of the videotape indicates Mendum's report has not accurately reflected Johnson's statements. For example, her title read, "Berkeley Law Prof Opposes Non-religious Nature of Science." The text, reinforced by a high-lighted call-out, read "[Johnson] vigorously argued against the non-religious nature of the scientific method itself."

Johnson did *not* oppose or argue against the non-religious nature of science or the science method. What he did object to and "vigorously" argue against was the misuse of science to advance the program of metaphysical materialism. To quote him from the tape: "But of course, there are two lessons that we should have learned about science from the twentieth century experience, and not just one. One lesson is that scientific technology properly applied does work wonders. The other is that pseudoscientific philosophies have continually borrowed the prestige of experimental science in order to put across philosophical, political, and religious doctrines of importance to certain movements. The great examples of our time are, of course, Freudianism—Freudian psychoanalysis, which was accepted by all the reasonable people in the universities and in the intellectual journals as science for so long—and Marxism. Darwinism applies to society. And indeed, in his introductory textbook for evolutionary biology students, Douglas Futuyma states that Darwin did for biology what Marx did for society and Freud for the mind. He advanced the program of mechanism and materialism, of metaphysical naturalism."

I would also like to correct Mendum's comment that Johnson stated "three times during the evening, that

one of the major reasons why he rejects evolution is that artificial breeding programs have not produced new species."

Johnson was not dealing with "evolution" which he carefully pointed out has many different meanings, but with a specific claim of Darwinism, the blind watchmaker thesis, "that unintelligent purposelessness mechanical forces created everything." Johnson also pointed out that he didn't want to lay too much weight on the lack of unequivocal examples of a new species, because he was concerned not with the production of a new isolated breeding group, but with something truly new, such as new kinds of organs and basic body plans. "In fact, the evidence of artificial selection is that change occurs within a very limited radius."

Further, Johnson called the use of artificial selection to demonstrate what you can do without purpose or intelligence, "a simple logical fallacy. What the artificial selection analogy really proves is that even with intelligence operating through selection, you get only limited variation."

In closing, I hope there will be more debates of the Johnson-Sarich format so that we can all become better educated and more precise in our communication as a result.

Rejoinder

Mary Lou Mendum
Department of Viticulture
University of California-Davis

John Wiester's criticism of my article hinges on two points: first, my statement that "Johnson vigorously argued against the non-religious nature of the scientific method itself," and second, my paraphrasing Johnson's contention that he rejects evolution because he knows of no new species which have been produced through artificial breeding programs.

The Johnson quotations Wiester offers with respect to artificial speciation, presumably transcribed from his tape of the debate, prove my point admirably. Johnson cites a lack of artificially created species as a reason to reject evolution. Such artificial species are fairly common among cultivated plants, and they can involve rather large changes in "kinds of organs and basic body plans." I can't really blame Johnson for not knowing

~
"[Darwin]
advanced
the program
of
mechanism
and
materialism,
of
metaphysical
naturalism."
~

Keeping Tabs

about plant breeding, since few popular science books bother to mention the subject. However, his understandable ignorance on the subject doesn't change the fact that he based his argument on a false premise, and Sarich should have called him on it.

Wiester's first objection, that Johnson was not, in fact, arguing against the non-religious nature of science, is more complex, because it involves semantics. Wiester and I are using very different definitions of "science" and "non-religious nature."

I define science as the process of discovering natural explanations for natural phenomena. As such, science is unavoidably materialistic. I agree with Wiester that not all important materialistic thought is scientific, as his Johnson quote demonstrates. However, the unarguable fact that Freudian psychoanalysis and Marxist economics do not conform to rigorous scientific standards does not change the equally unarguable fact that Darwinian natural selection *does*.

If Wiester wishes to limit the definition of "religion" to recognized denominations, with attendant dogma, scripture, set prayers, and clergy, then he is right. Johnson never advocated the addition of any particular denomination's religious assumptions to the scientific method.

However, in my article, I used the word "religion" in a broader sense to refer to supernatural thinking in general: the assumption that one or more beings exist which are not bound by natural laws. In his talk, Johnson repeatedly challenged Sarich for proof that natural laws could not, in theory, be suspended at certain times and places, and that such a suspension of natural law could not be responsible for fudging biologists' data enough to convince them that life evolved.

An old standby in freshman philosophy classes is to ask students to prove the world was not created ten minutes ago, complete with an internally consistent history of material objects and memories. By the time they get to be sophomores, the students have learned that one can't prove either side of a question if the question is stated in such a way as to invalidate, in principle, every existing piece of evidence.

If one assumes, as Johnson asks scientists to assume, that the data from any experiment are just as likely to be the result of a supernatural being's practical joke, as they result from natural laws, then the scientific method is a waste of time. Scientists might just as well give up and go home. I am sure that this

would please many creationists, since discarding all scientific evidence as unreliable would place religious explanations on equal footing with materialistic ones for the first time in three centuries.

However, even though the materialistic scientific method must also beg the theoretically unprovable question about whether suspensions of natural laws are possible, it has one irrefutable advantage over religious thought systems which have begged the question in the opposite way. It works.

[Editor's note: It is not my policy to publish endless debates about debates! However, I hope this exchange makes some sense to readers, even standing alone.]

Bible-Science Next for Rumania?

John Cole

I recently received a fund-raising phone call from a man speaking for the Bible-Science Association. He asked if I knew that "Greg just returned from an exciting visit to various Eastern European countries where there is a tremendous thirst for the Gospel?"

I thought fast and realized "Greg" is the Executive Director of B-SA and said, "No, I didn't know."

My caller went on to explain that wages were so low in those countries that they could set up a publishing and evangelizing project in a given country "for only \$100 per month—that's for writing, editing, desktop publishing, printing, and preaching the Gospel! We can hire people for as little as \$15 per month over there! Can we count on you?"

"No, I'm afraid not. . . ."

"But Mr. Cole, for your pledge of \$100 per month, you could support a month's work in someplace like Moldova or. . . ."

"No, thanks," I said.

From another Board member, I heard that they have specific plans to set up operations in Rumania. This confirms what we have reported before. Creationists are trying to move into Eastern Europe in a big way. We have no idea how successful this particular project will be, but long-stifled religious freedom combined with severe shortages of books, etc. and low wages make former Communist countries ripe targets for "scientific" creationists. *[Quotations are approximate: based on my notes—JRC]* □

~
An old
standby in
freshman
philosophy
classes is to
ask students
to prove the
world was
not created
ten minutes
ago

~

CD-ROM *Darwin*

Reviewed by Butler Crittendon
San Francisco

1992. Multi-media CD-ROM for MACs and PCs, created by Pete Goldie and Michael Ghiselin. \$99.95 from Lightbinders, Inc., 2325 Third Street, Suite 320, San Francisco, CA 94107 (800-432-3766). \$99.95; \$9.00 more for optional CD caddy. Requires 640K RAM with 500K available; Super-VGA, 512K on video board; Microsoft CD-ROM extension versions 2.0 or later.

CD-ROM *Darwin* is a first class addition to the library of anyone interested in the serious study of evolution or who just likes to read original works, including graphics. The sounds, of course are new—some 100 Megabytes of the 308 or so on *Darwin*, and only possible due to the multimedia capabilities of CD-ROM. The disk includes the complete text and computer replications of the original illustrations of Charles Darwin's *The Voyage of the Beagle* (final ed.), *Origin of Species* (6th/final ed.), *The Descent of Man* (final ed.), Darwin's and Wallace's 1859 manuscript outlining the theory of evolution, Michael Ghiselin's *Triumph of the Darwinian Method*, a Darwin timeline, a 1000+ item bibliography, and a brief introduction by Goldie and Ghiselin.

Using the CD-ROM medium requires more than technical skills because the selection of content is of great importance. Goldie's Ph.D. is in biology, so he is equipped for the task.

Darwin includes some 650 illustrations, including original maps, birds and other animals, geological data, plants, photos and portraits of the key players and how they lived, sketches such as the layout of the Beagle, and much more. Many of the images represent the first republication since the 1800s, and some of the material by distinguished naturalists has never before been published. The natural sound recordings come from the Cornell University Laboratory of Ornithology.

While *Darwin* is being marketed complete, by now, the total package was not available for review [May 1992]. It [seems] very user-friendly, with "Search" and "Browse" capacities—by word, author, subject and title. It allows Function-key rather than mouse-use, for people tired of using mouse muscles. The current edition does not support a mouse.

The brief introduction by Goldie and Ghiselin concludes with an invitation to users to contribute to future editions.

Without loss of image quality, and through compression, there is room for about four times more material on a future release. Users are encouraged to send pictures (still or animated), sounds, or special text material. In conversation with Goldie, I learned that *DiscPassage* is the one most widely-used CD-ROM software, with several dozen products using it. . . . [A] Windows version is in the works which probably will read the current disk. However, for anyone interested in Charles Darwin and Evolution, for pleasure or research, this *Lightbinders'* product is excellent . . . and a long wait for [a new version] is not warranted.

Finally, on a personal note I'd like to add that while I accept evolution and Darwin as 'reality,' I've come to the conclusion recently, after considerable study, that evolution does *not* explain *Homo sapiens'* presence on Earth. While I also do not accept the creationists' explanation, I have been stunned by my conclusion that they are closer to the 'truth' than the evolutionists. Anyone interested in hearing more about my research and/or obtaining a short reference list, please free to call. (415-346-9321)

[Reprinted with the author's permission and slightly condensed from *Blue Notes*, an IBM user-group newsletter.] □

Chemistry Olympiad

College/university chemistry teachers are invited to apply for a 3-year position as mentor for the US National Chemistry Olympiad Program. Duties include helping plan and conduct national study camps and service on international competition juries. For info, contact the American Chemical Society, 1155 16th Street, NW, Washington, DC 20036 (202/872-6169). The program does not limit the project to "chemistry professors;" anyone in several fields could potentially participate.

The deadline is 4 January 1993. (If you miss the deadline, the program may continue in future years.) □

~
rave
review—
Darwin for
CD-ROM
personal
computers
~

Cosmos, Bios, Theos

Reviewed by Frank Sonleitner
Dept. of Zoology, University of Oklahoma

Cosmos, Bios, Theos: Scientists Reflect on Science, God, and the Origins of the Universe, Life, and Homo sapiens, edited by Henry Margenau and Roy Abraham Varghese. LaSalle, IL: Open Court Publishing Co. 1992.

Most of this book is an anthology of views of 80 scientists, all of whom are theists or at least sympathetic to a religious view of reality. Their comments concern the origin of the universe, life, and the human species and the relationships between religion and science. The editors introduce the book with views on the Big Bang, the Anthropic Principle, Uniformitarianism, etc. If you don't believe in *Genesis*, the editors imply, you are an atheist.

Part I of the book considers the views of 30 astronomers, mathematicians, and physicists, while Part II examines the views of 30 biologists and chemists. All are distinguished in their fields, and they include over 20 Nobel Prize winners. "Creation scientists" are conspicuous by their absence. Part III is a debate between an atheist (Antony Flew) and a theist (H.D. Lewis) about the existence of God and the origin of the universe; this mainly concerns the argument as to whether the Universe can be its own cause, or must one postulate a separate ultimate cause for it?

Part IV contains two concluding postscripts on the origin of the Universe and relativity, quantum theory, and the mystery of life.

Most authors in the volume accept evolution and the Big Bang; some identify themselves explicitly as "Christians." At least one contributor, Thomas C. Emmel, a critical reviewer of *Of Pandas and People*, is an explicit evolutionist. □

Toshiba/NSTA ExploraVision Awards

\$300,000 in awards and prizes will reward "creativity, ingenuity, and teamwork" in science education. NSTA is mailing 240,00 entry kits to teachers in the US. Teachers who have not received kits should contact Toshiba/NSTA ExploraVision Awards, 1742 Connecticut Avenue, NW, Washington, DC 20009. □

Research Fellowships for Teachers

The American Society of Cell Biology and the American Society for Clinical Investigation both offer summer 1993 research fellowships for secondary school teachers. Both involve pairing teachers with research scientists, each of whom receives part of the awards.

For the ASCB, the ten-week fellowships provide teachers with a \$4000 stipend, plus \$850 to defray other expenses and \$750 for the sponsor-scientists. There were 26 awards in 1992. Applications are due 20 January 1993. For application forms and the names of possible scientist-mentors, write: ASCB, 9650 Rockville Pike, Bethesda, MD 20814-3992 (301/530-7153).

The ASCI fellowships provide \$6000 stipends for teachers to work 8-10 weeks in the laboratory of an ASCI member. Again, candidates should submit applications jointly with a member-mentor. The deadline is 31 January 1993. For applications and information, write: Christine Maline, 1983 Science Teacher Research Fellowships, ASCI, 6900 Grove Road, Thorofare, NJ 08086-9447 (FAX 609/848-5274).

Secondary School Prizes for Chem Teachers

Each year, the American Chemical Society sponsors a competition which recognizes innovative classroom and laboratory activities and teacher outreach activities to encourage other teachers. In each case, emphasis is on polymer chemistry. The "Award for Excellence in Polymer Education by a Junior High or High School Chemistry Teacher" is awarded by the ACS Polymer Education Committee. National winners and Honorable Mention recipients receive cash awards, lab supplies, and certificates of recognition.

1993 applications are due 31 January 1993; write Susan Gertz, Polymer Ed Coordinator, c/o NCPE, University of Wisconsin-Stevens Point Department of Chemistry, Stevens Point, WI 54481. □

Faith is a fine invention
When gentlemen can see,
But *Microscopes* are prudent
In an emergency.

Emily Dickinson, ca. 1860

views of 80
scientists,
all of whom
are theists
or at least
sympathetic
to a
religious
view of
reality

Rod Kuehn submits the following to NCSE for reader reaction—a statement which he submitted as a “minority report” to a Minnesota school policy committee. This is not an NCSE policy broadside but is reprinted in order to solicit comment or foment discussion. What do you think? Send replies or comments clo—Ed.

Guidelines for Handling Challenges to Evolution

Rod Kuehn

1. The US Supreme Court declared in 1987 that scientific creationism is a religious doctrine. Creationism lacks the characteristics of science and lacks scientific support. It is therefore illegal and inappropriate to include creationism as part of the public school curriculum. Permitting the teaching of creationism would open the district to lawsuits based on a violation of the 1st Amendment to the Constitution of the US.

2. Educational curiosity cannot be maintained if questioning is discouraged. However, it is also true that extensive debate can destroy a curriculum by devouring too much time. The following guidelines are designed to balance these competing interests.

a. The student should understand the non-theistic nature of science. Religious arguments are not appropriate in a science classroom.

b. The teacher shall have access to reference materials [on the evolutionists' responses to creationist claims] somewhere in the school. . . .

c. The scientific attitude of open inquiry and critical thinking requires that courteous challenges be welcomed. The teacher shall decide whether the most effective response would be a classroom discussion, distribution of reprints or a method described below. If too many

challenges are brought, the instructor may ask the students to combine their efforts and select a small number of points to contest. The instructor may also choose a few of the most significant issues to wrestle with.

d. The student should challenge the appropriate instructor. Questions of physics should be directed to the physics teacher [for example].

e. Teachers are not [usually] professional evolution[ary scholars] and should not be required to defend all of the intricacies of evolution. It is reasonable, however, to expect a good knowledge of the most germane lines of evidence such as the implications of the orderly stratification of fossils and the important intermediate fossils.

f. Because poorly focused discussions are unproductive, students who wish seriously to challenge a teacher should do so in writing.

g. Judgements are apt to hinge on the validity of evidence and its interpretation. The challenger shall therefore present the original journal articles used as evidence [or resources]. The media center may help obtain the required [items from libraries]. Similarly the instructor shall present information supporting evolution.

The information can then be evaluated for accuracy and quality of source.

h. If the instructor thinks the question suitable, and time is available for general discussion, the comparison should be done in the classroom. The comparison may be done privately if the challenge occurs at an inappropriate time or if the material is not sufficiently germane to the class.

3. Middle and Senior high schools should maintain a basic library collection of books presenting theological, legal, and scientific issues [pertaining to] evolution [education]. [In addition to works by evolutionists and “scientific” creationists], this collection should also contain a range of other non-fundamentalist Christian and non-Christian creation stories as well as the views of agnostics and atheists.

4. Parents have a right to know what their children are being taught. The District will therefore have regular showings of controversial materials at open-houses and other school-sponsored events. Furthermore, the District will develop procedures to expedite [parental access to controversial materials].

5. Topics of special concern to the community should receive special attention to ensure student understanding.

Address Correction Requested

12:3

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