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John Cole

After a successful move to require a period of silent reflection or prayer, the Merrimack, NH school board is preparing for a proposal by a local minister to require the teaching of some form of scientific creationism to balance evolution in science classes. The Rev. Paul Norwalt was authorized by a 3-2 board vote to present his curriculum ideas at a forthcoming meeting, but action was postponed from February to May 1995. ICR's Duane Gish has been there to rally support.

A conservative election victory this Fall in the Boston suburb has reportedly launched a series of "new" approaches to education and ignited a local furor. The teacher association and many parents are alarmed, the *Boston Globe* reports (23/12/94). The board's former chairman who was defeated by three votes by a religious conservative said he feared Merrimack would start a trend in the state, and indeed a series of other towns have adopted silent prayer or meditation requirements in the wake of the Merrimack vote. Some stu-

dents have been suspended for refusing to honor the silent prayer period.

New Hampshire Governor Stephen Merrill said, "There are worse things that could be taught in the schools, and I'm a strong believer in local [board] control." State Board of Education Chairman Ovide Lamontagne was quoted by the *Globe* as saying, "To the extent that there is legitimate scientific inquiry into the theory of creationism, school districts should be open to presenting both in

science class." House Democratic Leader Rick Trombly has called for Lamontagne's resignation.

No other NH town has yet begun an "equal time for creationism" move, to our knowledge. Meanwhile, the creationists expect little progress this year for the simple reason that the town lacks a budget for new books or teachers. NCSE has been working with local people on this and will keep you informed. ❖



Expulsion from Eden.

Coming soon to a school board near you!

EDITOR'S DESK

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In November I visited the NCSE office in Berkeley, CA. The last time I had been there, NCSE was just getting organized, and the office was in Eugenie Scott's basement. Now the office is a medium-small rented room with a separate bathroom and storage closet down the hall. It has five desks and a couple of work tables, a number of filing cabinets and bookshelves, two full-time employees, 2 part-timers, a couple of part-time intern/volunteers, and two phones ringing more or less incessantly. The office is on the second floor, above an ok semi-Mexican restaurant, and is located in a warehouse district of Berkeley next door to a cement factory emitting much noise and offensive air pollution.

Not the lap of luxury!

I visited on several different days. Each time I was dragooned into answering telephone questions—a very interesting and rewarding experience. I spoke to a dozen or so members who had interesting questions, great offers of assistance, interesting feedback, etc. In the latter category, it especially was nice to hear from readers directly with suggestions, praise, and gripes.

Spending time with Genie, Erik, Tully, Molleen, and Teresa, I was impressed with their dedication (typically working far beyond normal hours, for example), enthusiasm, commitment, and sense of service, enjoyment and humor.

I left reinforced in my thinking that my twenty-five bucks dues were being well-spent! But I DO urge them to get a window—I wouldn't begrudge such luxury.



November elections produced a new national majority of 51% of the 39% of the electorate who bothered to vote which claims to have a mandate to reshape American politics—and education. I would suggest that the vote was more against “business as usual” than for a religious right agenda of creationism and dissolution of the American church-state separation which has protected religion in this country so long and so effectively. Doomsayers may throw in the towel, but perhaps they do not understand that occasional catastrophes do not negate evolution! In any case, the election has drastically increased calls to NCSE for aid.

John Cole

Cover: Adam and Eve engrav-
ing from 1880 Bible



Adam and Eve Expelled from Vilas Park

Andrew J. Petto
Center for Biological
Education, University of
Wisconsin-Madison

The Vilas Park Zoo in Madison, Wisconsin is a year-round County-run facility a short distance from the University of Wisconsin campus. A number of UW-M students and faculty use the Zoo for teaching and research, as well as educational outreach and enrichment. The Zoo is well known for its exhibits and educational programs, especially for the Discovery Center in which visitors can explore issues in conservation, ecology, taxonomy, and animal behavior. One wall of the Discovery Center is painted with a large mural that focuses attention on the effects of human exploitation on natural ecosystems with dire predictions about the future of the planet in the face of increasing human population growth.

In August, 1994, Annie Laurie Gaylor of the Freedom from Religion Foundation protested that the mural used Biblical imagery to convey its message and that these images ought to be removed from a publicly supported institution (See *Reports* 14(3):1). A short time later, Wisconsin members of NCSE mobilized to support the removal of a plaque attached to the mural that charted the growth of the human population beginning with Adam and Eve in 15,000 B.C. An important part of the effort revolved around a strategy to protest the Biblical imagery as scientifically inaccurate and educationally unsound

while at the same time offering the resources of the University to design a new display that conveyed the important messages about human evolutionary ecology and population growth that were at the heart of the original display.

These letters went to the Zoo's director, Dr. David Hall, and to the county executive, Rick Phelps, and his assistant, Roberta Gassman. Hall was cool to the idea, but in an election year, Gassman replied immediately and accepted our help and advice. Obviously at her prompting, a letter came from Hall to our Center for Biology Education asking for comments on a new proposal that did not make any specific Biblical reference (although the use of B.C. and A.D. are retained for marking dates).

The Madison contingent of the NCSE responded beautifully with a variety of comments and references regarding estimating population growth in prehistoric and historic times (and into the future). These recommendations were sent to the Zoo with a letter offering to continue to help in the future with educational issues. We are still awaiting a response from the materials and recommendations that we sent to the Zoo, but the Adam and Eve placard is nowhere in sight at the Zoo.

In related matters, David Hall told a local weekly newspaper (*The Isthmus*) that he was, indeed, a creationist and had been instrumental in the commissioning, the design, and the execution of the mural. The County toyed

with a "free speech" defense against a lawsuit threatened by FFRF, but quickly changed tacks. We also wrote to the city editor of the local newspapers (not for publication) to point out the scientific and educational issues that were at stake here. The paper's headlines generally played the controversy as the "atheists" against the Zoo or County.

As of this writing, relations with the County and the newspaper are very good; relations with the Zoo administration are civil. However, we believe that the strategy of offering a helping hand to set things right went a long way towards getting us invited to the table, at least by the County executive's office. Most of all, we believe that offering help with the criticism has left the door open for more cooperation between the academic community and the Zoo in ways that can promote an evolutionary understanding of biology as exhibits and programs are redesigned in the future. ♦

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Psychic Creationism

According to *The Georgia Skeptic*, Winter 1993, p. 3, "psychic" Jeane Dixon predicted, "ice taken from the 5,000 year old ice man found recently in a glacier on the Italian-Australian border (sic!) will support the Bible's version of creation." Another psychic fizzle. Also, it wasn't even on a glacier, let alone on the elusive Italo-Australian border.

Religious Right Protests Vehemently

Peloza Appeal

Eugenie C. Scott

The case of creationist teacher John Peloza was remanded to the District Court for the Central District of California on July 25, 1994, as reported in *Reports* 14(2):1. Since that article was published, the 9th Circuit Appeals Court withdrew the opinion on September 21, and in a move that surprised both sides of the case, reversed its opinion on October 5.

Peloza had claimed that the San Juan Capistrano school district was forcing him to violate the Constitution's "establishment clause" when it required him to teach evolution, which he defined as a religious belief. The school district requested dismissal of the case. The District Court had rejected Peloza's claims in a sharply-worded decision that referred to Peloza as a "loose cannon" who did not have the right to impose his religious beliefs on students. The July Appeals Court decision directed the District Court not to dismiss but to hear the case, suggesting nonetheless that Peloza would have a difficult time proving his case. The new, October version of the Appeals Court decision agrees with the District Court that the case should be dismissed, and if anything, is even stronger in its support of the teaching of evolution.

First, the Appeals panel of the same 3 judges underscored its earlier evaluation of Peloza's complaint as "not entirely consistent" and "patently frivolous" in claiming that the district acted

unconstitutionally in requiring him to teach "as a valid scientific theory, that higher life forms evolved from lower ones" and that the district forced "him to teach evolution as fact." In regard to the latter, the court went on to say, "Although possibly dogmatic or even wrong, such a requirement would not transgress the establishment clause if 'evolution' simply means that higher life forms evolved from lower ones."

Peloza, of course, defines evolution as a religious concept which denies the possibility of any intervention by a Creator. Although Peloza uses the terms "evolution" and "evolutionism" interchangeably, the court stated that both terms "define a biological concept: higher life forms evolve from lower ones. The concept has nothing to do with whether or not there is a divine Creator (who did or did not create the universe or did or did not plan evolution as part of a divine scheme)."

Charitably read, Peloza's complaint at most makes this claim: the school district's actions establish a state-supported religion of evolutionism, or more generally of 'secular humanism.' . . . We reject this claim because *neither the Supreme Court nor this circuit has ever held that evolutionism or secular humanism are 'religions'* for Establishment Clause purposes. Indeed, both the dictionary definition of religion and clear weight of

the case law are to the contrary. The Supreme Court has held unequivocally that while the belief in a divine creator of the universe is a religious belief, the scientific theory that higher forms of life evolved from lower forms is not [emphasis added].

The panel was rather sharp about the separation of evolution from religion, and Peloza's failure to prove a link between them:

Peloza would have us accept his definition of 'evolution' and 'evolutionism' and impose his definition on the school district as its own, a definition that cannot be found in the dictionary, in the Supreme Court cases, or anywhere in the common understanding of the words. Only if we define 'evolution' and 'evolutionism' as does Peloza as a concept that embraces the belief that the universe came into existence without a Creator might he make out a claim. This we need not do. To say red is green or black is white does not make it so. Nor need we for the purpose of a 12(b)(6) motion accept a made-up definition of 'evolution.' Nowhere does Peloza point to anything that conceivably suggests that the school district accepts anything other than the common definition of 'evolution' and 'evolutionism.' It simply required him as a biology teacher in the public schools of California

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"neither the Supreme Court nor this circuit has ever held that evolutionism or secular humanism are 'religions' "
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Reversed!

to teach evolution.' Peloza no where says it required more."

As noted in an article in the *Los Angeles Times* (10/5/94), the American Center for Law and Justice has taken on Peloza's case. The ACLJ is a nonprofit organization that promotes a generally right-wing view of the Constitution and Bill of Rights. ACLJ head Jay Sekulow is quoted as saying, "We are not going to let this case just sit. There is no doubt there will be a petition for a rehearing. We'll go all the way to the Supreme Court if necessary." Attorney and sometime Institute for Creation Research associate Wendall Bird, who presented the creationist side of the issue before the Supreme Court in the 1987 Louisiana *Edwards v. Aguillard* decision, is working with the ACLJ on this case.

The plaintiffs requested a hearing *en banc* by the full Court of Appeals, which can overturn decisions of the three-person panel. On November 25, 1994, they were denied, which gives them 90 days to file an appeal to the Supreme Court, if they desire. ACLJ spokesmen have previously said they would appeal if turned down by the Court of Appeals. NCSE will keep you informed.

Significance of the Decision

Phillip Johnson, author of *Darwin on Trial*, and many other creationists have defined evolution as a *de facto* religious belief that rejects the possibility that a

supernatural Creator was involved in any way with producing the universe or life in it. Henry Morris and Duane Gish of the Institute for Creation Research have said repeatedly that "evolution is just as religious as creationism."

Thus, evolution in their hands becomes an antireligious doctrine. Actually, as science, evolution is unable to make claims about the presence or absence of supernatural influence in the history of life or the universe: supernatural forces are simply outside the realm of what science can deal with. Evolution, as science, by referring only to natural causes, employs what is sometimes called methodological naturalism. The confusion of this methodology with philosophical naturalism is at the root of the

claim that evolution is a "religion of nonreligion."

The Appeals Court decision in Peloza states, as have some previous decisions, that evolution is science, but it also states unequivocally that evolution is not religion. Although such a claim is absurd, it is regularly made at school hearings and curriculum committees around the country where there are efforts to discourage the teaching of evolution. Evolutionists now have a new arrow in their quivers when this nonsensical claim is made. Antievolutionists erroneously dredge up a footnote in the *Torcaso* decision to allegedly "prove" that the Supreme Court has "declared" that "secular humanism is a religion;" evolutionists can now rightfully claim that a "court has declared that evolution is not religion." ❖

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ICR:
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Houghton College Biologist New ASA Head

Donald William Munro, Jr., a biologist at New York's Houghton College, was named Executive Director of the American Scientific Affiliation in summer 1994. Long the biology department chair at Houghton, Munro is also an ASA past-president. He succeeds Robert L. Hermann, director for the past 13 years. Munro is particularly interested in bioethics issues in biology and medicine, according to ASA president Fred S. Hickernell.

The ASA is a 53-year old organization of evangelical

Christians with professional training in science. "Scientific" creationist organizations formed as splinter groups over the decades, disagreeing with the ASA's efforts to moderate between science and Biblical literalists and objecting to the ASA openness to "Old Earth," progressive, and "gap theory" creationism. The ASA published *Teaching Science in a Climate of Controversy* several years ago, drawing considerable criticism and exasperated comment from evolutionists and NCSE. ❖

Gould Promotes Creationist Book?? (No)

Eugenie C. Scott

Sharp-eyed NCSE member Robert Dennison was browsing through the Texas Association of Biology Teachers exhibit area and noticed that Houghton Publishing Company was promoting their creationist book, *Of Pandas and People*. Here is his description of what happened, (from the Winter, 1994 *The Nucleus*, the TABT association newsletter):

As I approached the booth, a teacher was saying to the salesman, "I loved Stephen J. Gould's book, *The Panda's Thumb*, so this book must be pretty good." The salesman did not correct the teacher's obvious misconception that there was any connection between Gould's book and [this] *Pandas*. Instead, he just said, "This is a good book. It presents some non-Darwinian alternatives to some of the issues that come up in a biology class." The phrase, "non-Darwinian" seemed to catch the teacher's ear causing him to ask, "Am I dealing with a creationist text here?" To which the salesman responded, "No! This book is not creation science. In fact, the authors promote a new theory called 'intelligent-design.'" While listening to this amazing exchange, I was looking around the booth and discovered why the teacher had made his original comment about Gould's book: In large let-

ters on the backboard was the following statement: "Scientific Authorities endorse *Of Pandas and People*." Directly beneath that statement was this quote: "The most sophisticated . . . text"—Stephen Jay Gould. I confronted the salesman, asking him whether or not Stephen Gould endorsed *Pandas*. He said, "No, he doesn't." I said that the backboard certainly implied that he did, to which the salesman replied, "Well, we may not have put the entire quote up there, but those words are accurate." Needless to say, I was amazed and incensed by this entire exchange. (Coincidentally, an article in the November 11, 1994 *Wall Street Journal* relates a similar incident involving another teacher at CAST, showing that my experience was not an isolated case.) The fact that these people were and are willing to blatantly misrepresent the truth in order to sell books to science teachers speaks volumes to me about the quality of both the publishers and their text.

Of Pandas and People is a creationist book discussed several times in *NCSE Reports* (10(1):16; 10(3):4; 11(1):10; 11(2):14). The quotation from Gould originated in a *Natural History* article published in May, 1994, "Hooking Leviathan by Its Past." The article discusses "superb examples of intermediary forms" as a direct rebuttal to creation science. After citing some creationist books, Gould goes on to say, "The

most 'sophisticated' (I should really say 'glossy') of creationists' texts, *Of Pandas and People*, by P. Davis, D.H. Kenyon, and C.B. Thaxton (Houghton Publishing, 1989), says much the same, but more in the lingo of academese" (and a long quote about whales follows). Considering Gould is attacking creationist books, it is difficult to argue that he is saying anything nice about *Pandas*. NCSE members who attend science teacher conventions should be on the lookout for this display, and protest its presence if it remains unchanged from the Texas exhibit described here.

ICR's Aardsma Backs Carbon-dating

At the 15th annual Radiocarbon Conference in Glasgow, Scotland, ICR's G.E. Aardsma gave a paper which endorsed the accuracy of radiocarbon dating and its agreement with tree-ring dating, at least back 7000 years or so. (Critics can ask, why not a few years more—say, 40,000 years?) Aardsma also said that "a scribal error" in *1 Kings* 6:1 has misled scholars researching early history. (480 years was really 1,480 years, he said.) Thus, a leading biblical literalist argues that there can be biblical errors introduced by humans, and we commend him for it. The abstract of "Radiocarbon and Biblical Chronology" was distributed at the conference.

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NEWS

Update: State Court Invalidates Michigan's Charter School Law

Molleen Matsumura

When the nation's attention focussed on the Noah Webster Academy, one of the first schools to apply for funding under Michigan's new charter school law, even charter proponents said that, "If someone wanted to make . . . the law look bad, this is the sort of thing one might do." That seems like an understatement, in light of details such as the fact that the president of the school board that granted the school's charter was paid \$125,000 for the tiny log cabin which became "Noah Webster's" official home in the district, and the school district was promised a percentage cut of each dollar in state aid received. Noah Webster had thousands of applications from home schoolers offered a promise of state-paid-for computers and printers, among other inducements (which did not include actual classes and teachers!).

However, the Michigan court looked beyond the Academy's obvious attempt to take advantage of the law, to the law itself, and issued a decision that was the death knell for *any* charter schools in Michigan, not only those with religious associations. According to the National Coalition for Public Education and Religious Liberty, the court found that the law violated the state constitution because it "prohibits academies from being affiliated with religious organizations but fails to prohibit the teaching of religion." But the court also detailed the ways in which the law

amounts to an unconstitutional delegation of the authority of the Michigan Department of Education, declaring, "where as here, substantial if not most, of the control of the academy is placed beyond the hands of the public, the Constitution has been violated."

For the Academy, the defeat is especially stinging because they had begun operation in anticipation of receiving \$11,000,000 that the Education Commissioner has decided not to release. Many hopeful volunteers will *not* be paid.

The defeat of Michigan's charter school law isn't the end of the charter school story; as of this writing, we are waiting to learn whether an appeal will be filed.

And, of course, charter school advocates are active in other states. Perhaps they will learn from the Michigan experience and word legislation more carefully, like California's experimental charter legislation which stipulates "a charter school shall be nonsectarian in its programs. . . ." Those who favor charter schools as a means of funding religious education may focus on states without constitutional provisions against funding religion, and eventually force the issue to the Supreme Court level.

Meanwhile, there are plenty of other strategies creationists can try. In Michigan, their next effort may be to influence new proposals for science curriculum guidelines (see *Unsung*. . . , p. 11). ❖

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"If someone wanted to make . . . the law look bad, this is the sort of thing one might do."
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The Genesis Institute Selling Geocentrism

The Genesis Institute, founded by former Bible-Science Association director, the Rev. Walter Lang, writes seeking member/subscribers and offering a list of creationist books for sale.

The GI mailing stresses the new interest in geocentrism, contrary to the research of Copernicus, Galileo, and several other astronomers.

"Right now we are promoting the book called *Geocentricity*, by Dr. Gerardus Bouw. We believe this is possibly the most in-depth study of the question

so far produced. It is available from the Genesis Institute for \$17 plus \$2 for shipping and handling. There is also a video produced by Dr. Bouw back in 1990 that answers the questions brought up in connection with the debate of whether the Earth or space turn [*sic*]. This is \$19.95 (+p&h)."

The Institute sells a number of books and articles and even Bibles.

Anyone interested can contact the Genesis Institute at 7232 Morgan Avenue South, Richland, MN 55423-2940. ❖

Elections Bring Good News to FL, CA Districts, Not Such Good News to La.

Eugenie C. Scott

Two school districts followed by NCSE appear to be on the way to achieving some peace, after several years of stormy division. Another appears to be headed for continued strife.

Citizens in Vista, California, the "poster child" of religious right takeovers, (*NCSE Reports* 13(1):1; 13(2):1), in protest over a board

majority that attempted to get a creationist textbook adopted (among other issues), organized a recall election to replace two candidates who had been elected in 1992. They were successful in recalling John Tyndall, accountant for the near-by Institute for Creation Research, and Joyce Lee. There are now five moderates in charge of setting policy in Vista.

Attorney Richard Eiden, a member of the recall-supporting Coalition for Mainstream Education, sounded conciliatory after the victory. Reflecting upon the campaign as well as the last two years, Eiden stated that the winners "learned we have to be more sensitive to (conservative community members') concerns." We can't just tell them to go to hell when we are in power." He stated that one of the problems of the previous board was that it made "no pretense of listening to what any of us said," and that he hoped the new board would work with all members of the community to gain consensus.

Good luck, Vista. We're sure you are happy that the cameras have finally gone home!

The school district in Lake County, Florida, (*NCSE Reports* 11(2):1; 12(3):4; 12(4):8) has had a Christian Coalition-sponsored school board majority which for the last four years has pushed various religious-right agenda topics, including creationism. As in Vista, the dominance of this group also came to an end with the November, 1994, election, when all three Christian

Coalition candidates lost to more moderate opponents.

An unusually high voter turnout of 28 percent (compared to a statewide average of 13%) voted 2-to-1 to reject a board that had promoted creationism, abstinence-only sex education, "America first" history, and "Christian values" in the classroom.

Unfortunately, the Tangipahoa Parish, Louisiana, school district re-elected most of the incumbent creationism-supporting candidates, and thus we can expect more problems from this site in the future. The election produced 6 creationist candidates, 1 swing voter and 2 moderates. As reported in this newsletter (*NCSE Reports*, 14(2):8), the Tangipahoa school board passed a requirement in April, 1994, that teachers must read a disclaimer whenever evolution is taught stating that the presentation of "the Scientific Theory of Evolution" is not "intended to influence or dissuade the biblical version of creation or any other concept." The Louisiana ACLU, no stranger to creationism after the historic *Aguillard* cases, has filed suit against the district over the disclaimer. In December, the school board decided to fight it, with assistance from the Rutherford Institute.

So, even though Vista, CA, and Lake County, FL, won't be kicking around evolution anymore, we can anticipate there will still be plenty of news on the creationism front. NCSE will keep you posted on legal issues in Louisiana, and elsewhere.

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Ernst Mayr Receives Highest Biology Prize

Evolutionary biologist Ernst Mayr, one of the founders of the "New Synthesis" creating modern biological theory, received the \$100,000 International Prize for Biology, popularly called the "Japan Prize," in October 1994. He previously had won the Balzan Prize from a Swiss-Italian foundation. There is no Nobel Prize in biology, but these two awards are considered the equivalent honor. Mayr's pioneering studies of fruit flies were instrumental in founding the field of population genetics. A Harvard Professor Emeritus and NCSE member, Dr. Mayr has been a leader in the effort to bring biological literacy to the nonspecialist and the general public. He has been a principal editor and historian of Darwin's work. At 90, Dr. Mayr is active in research and writing at Harvard. NCSE joins in appreciating his scholarship and public service and says "Congratulations!"

NEWS

Moon School District Brought Back To Earth

Molleen Matsumura

Students in Pennsylvania's Moon Area School District will no longer be taught that death was unknown until Adam and Eve ate the apple, or that nearly all life was destroyed in the Noachian flood. Under the terms of a settlement negotiated by the District and the American Civil Liberties Union and approved in District Court on December 2, 1994, the school cannot teach "a literal interpretation of the Book of Genesis . . . as science or in a science class or as fact." Jon Pushinsky, the volunteer lawyer who handled the case, commented, "The school's presentation of religious theory as biology demeans religion, which is rooted in fact, and distort science, which is tested by

observation and use of the scientific method."

Because the settlement states that creationism cannot be taught "as fact," proponents will not be able to use the specific mention of science class as a loophole and advocate Biblical literalism in other classes. The settlement also provides that, "Moon Area School District administrators, teachers or guest instructors are not permitted to express their personal religious beliefs or their beliefs concerning any version of creation or world development rooted in religious beliefs during regular school hours or as part of the school's instructional program."

The settlement may influence policy in other Pennsylvania schools, as well. In October, the Keystone

School District Board in Knox, Pennsylvania, in order to show "sensitivity to the religious community of this school district," voted to retain the practice of opening their meetings with prayer, but continue to exclude creationism from the curriculum. While their decision has been criticized by signers of a petition supporting creationism, it can only seem practical in light of the Moon district's experience.

But the recent settlement is not necessarily the end of creationist pressure in Pennsylvania. If experience is any guide, it may evolve away from the kind of Biblical literalism that the Moon School District has abandoned, to rely on gambits like "evidence against evolution" and "intelligent design theory." ❖

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"presentation
of religious
theory as
biology
demeans
religion"
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NCSE Offers New Service

Jack Friedman

There are always times when someone needs to be remembered. Whether it's a graduation, promotion, get well wishes, or any congratulatory message that you want sent, NCSE can provide you with a choice demonstrating your good wishes which has no calories, won't wilt in a day or two and will keep on being useful long after batteries might wear out. Also, sometimes when a friend or acquaintance dies and you wish to express condolences, you may want to do something more meaningful than send flowers. NCSE offers a service to help.

A contribution to NCSE can be a useful salute to whomever you wish to honor.

Let us know, and we will notify the designated person or family that you have sent a gift to NCSE in their name. We will also send you a receipt for your records to show the matter was handled promptly. A donation envelope is enclosed with this issue of *Reports*. If you don't need it this month, stash it away and use it soon.

Many people appreciate a contribution made to an intellectual and academic cause rather than spent on ritual flowers or candy. In addition, it is an opportunity for you to support science education.

Planned Giving

When drafting or revising your will or life insurance, please consider making a bequest to NCSE, Inc., a tax-exempt 501(c)(3) nonprofit educational organization under IRS rules. For more information, contact NCSE, PO Box 9477, Berkeley, CA 94709 (510-843-3393).

And all donations are tax-deductible.

If you have any questions or would like more donation envelopes, please call me at (516) 921-5522. ❖

Creationism and Evolution: What Can YOU Do?

Molleen Matsumura

This headline is not only the title of NCSE's introductory brochure, but a question our members often ask. Many of you showed your eagerness by responding in surprising numbers to the call for volunteers in the last issue of Reports. Thank you! Luckily NCSE's staff gets plenty of help from our members in answering this question. Read on. . . .

There's good news for everyone who's been interested in the FAQs (frequently asked questions) Project. Richard Wakefield and Tom Atkins have volunteered to create comparable, indexed CD-ROM programs for both PC-compatible and Macintosh users. If you have computer files of refutations of

creationist "factoids" (such as the claim that the amount of helium in the atmosphere proves that the earth is about 10,000 years old), please save them to diskettes and mail to:

In Macintosh format:

Richard Wakefield
385 Main Street
Beaverton, LOK,
Ontario, Canada

for IBM compatibles:

Thomas Atkins
2019 North Teilmann, #102
Fresno, CA 93711-0564

Sometimes members ask for information they can re-distribute. A Louisiana member wrote to tell us that people are even more and more interested in accessible, educational scientific literature. When he saw a table with creationist litera-

ture, he added some NCSE materials and some booklets describing local geology. It was the geology booklets that were snapped up the fastest. He suggested that NCSE stock information like this, and we do offer for sale a number of "Roadside Geology" books dealing with local areas. He also inspired this next request: Many local scientific societies and museums offer attractive illustrated materials on dinosaurs, geology, local fossils and other evolution-related subjects. NCSE would like to see the best of these and not only acquire some of them, review them (complete with ordering information) in future issues. If you have a favorite resource, please mail us a copy. ❖

Keep sending suggestions, and NCSE will keep passing them along! ❖

Thank You Note

Molleen Matsumura

An NCSE member sent a copy of NCSE's announcement of our new hotline to his district's school superintendent and wrote to us asking, "Was that okay?" A Department of Public Instruction consultant called to ask for advice on winning local acceptance of curriculum materials with an evolutionary emphasis. I asked her how she heard of NCSE and she told us that a friend of hers had seen a note about us on a computer bulletin board. Just today, I received a request for information about NCSE's book *Voices for Evolution* on another

bulletin board. Nobody at NCSE placed either of these notices; members did it. Was that okay? Yes!

This has been a wonderful year for NCSE. Media coverage like the article in *Mother Jones*, and coalition work with organizations like the ACLU and People For the American Way have made many more people aware of NCSE; we get more phone calls, more letters, and many more opportunities to defend evolution. But that's not all. Members who find creative ways to spread the word about what we're doing have been a big help. Thank you very much.

And if you're wondering whether you should keep the good work . . . Yes! ❖

NCSE Director Named CAS Fellow

The California Academy of Science inducted NCSE Executive Director Eugenie C. Scott as a Fellow of the Academy. At the October 4 meeting, she was cited "in recognition of (her) many contributions to the advancement of science." Congratulations!

❖
CD-ROM
project
❖

NCSE NEWS

Unsung Good-Guys: NCSE's State Liaisons

Molleen Matsumura

NCSE's old friends remember that our national organization was launched by a coalition of autonomous "Committees of Correspondence" based in 47 states and several Canadian provinces. Many of these Committees are still operational, working with NCSE to assure that grassroots challenges get a grassroots response. In addition, NCSE has at least one volunteer representative in every state. The short version of a State Liaison's job description would be, "Do whatever needs to be done." Besides providing vital local support in emergencies, State Liaisons look for ways to increase public understanding of the issues on an ongoing basis.

Many liaisons work to help inform the public. Some make a point of speaking to their own professional organizations about the problem of creationism, how to teach evolution, and similar topics. Others, like

Jim Strayer, one of three liaisons in Florida, also speak to civic groups. Washington's Mark Zingarelli described his experience opposing creationism in the February/March, 1994 issue of *Mother Jones*, while Hawaii's Dave Krupp persisted for months until a local newspaper printed his response to creationist letters to the editor. Dave may get some help soon—by now, NCSE's Hawaii members have received his invitation to a meeting that may launch one more Committee of Correspondence.

Often, however, the work of our liaisons is less visible, the kind of "behind the scenes" effort that gets important jobs done without making a public splash. In Pennsylvania, when the ACLU filed suit against the Moon School District's practice of holding student assemblies with creationist speakers, Emmanuel Sillman didn't wait to be asked to find scientists willing to volunteer as "expert witnesses"; now Milton Fingerman is helping the same way in Louisiana (see *Elections*, p. 8). In Michigan, Carl

Bajema not only submitted written comments emphasizing the importance of evolution in proposed science curriculum guidelines, but drove an hour and a half to speak at public hearings and meet with state education officials.

This is just a sample of what the State Liaisons do to make NCSE effective. And you don't even have to carry a tune to cheer on these unsung Goodguys. Just plan for the day your liaisons may call on you for a bit of help, and say the word that will be music to their ears: "Yes." ♦

Creationists and the Grand Canyon

"Scientific" creationists argue that the Grand Canyon was formed almost literally overnight by Noah's flood waters. The Institute for Creation Research leads annual field trips to the canyon where they teach their students (and amaze passers-by) that this mile-deep erosion through distinctly bedded rock was caused by a single catastrophic event.

OK. So you're convinced a mile-deep gully could form this way. Then what about El Cañon de Colca in Peru, which is 10,574 feet deep? The same amazing arguments apply, I suppose, but I've never seen creationist references to this grander canyon! (It's twice as deep but not as long—still, it deserves some publicity and creationist tourism, I think.)

New Year's Bonus

Watch your mail-box for a letter in an NCSE envelope which won't have news of a crisis, or a donation request (those are only sent twice a year) but an end-of-year bonus—an Alamo Rent-A-Car I.D. card. NCSE members can use the card to obtain a 10% discount, and waiver of "additional driver fees" when reserving rental cars in the U.S. and Europe. Attached to the card is a gift certificate for discounts on daily, weekend, and weekly rentals.

No, rental cars don't come with NCSE bumper stickers or glove compartment pamphlets, but you could drive one to the Dinosaur National Monument or other inspirational locations. And, every time you use your discount card, part of the rental fee will be donated to NCSE. You save money, and NCSE earns money showing appreciation for your support. ♦

RESOURCES

Books

	LIST	MEMBERS		LIST	MEMBERS
Berra, <i>Evolution and the Myth of Creationism</i>	8.95	7.00	McGowan, <i>Dinosaurs, Spitfires and Sea Dragons</i>	14.95	12.00
Bowlby, <i>Charles Darwin: A New Life</i>	14.95	11.95	McGowan, <i>In the Beginning... A Scientist Shows Why the Creationists Are Wrong</i>	18.95	15.25
Bowler, <i>The Non-Darwinian Revolution</i>	12.95	10.35	McIver, <i>Anti-Evolution, An Annotated Bibliography</i>	15.95	12.75
Cartmill, <i>A View to a Death in the Morning</i>	*29.95	23.95	McKown, <i>The Mythmaker's Magic</i>	23.95	19.15
Clark, <i>Evolution and Cultural Literacy</i>	7.00	5.60	NEW Miller & Van Loon, <i>Darwin for Beginners</i>	9.00	7.00
Dalrymple, <i>The Age of the Earth</i>	24.95	19.95	Moore, <i>Science as a Way of Knowing: The Foundations of Modern Biology</i>	32.50	26.00
Dawkins, <i>The Blind Watchmaker</i>	10.95	9.50	Newell, <i>Creation and Evolution: Myth or Reality?</i>	12.95	10.35
Deford, <i>A Reparation: Universal Gravitation a Universal Fake</i>	6.00	4.80	Numbers, <i>The Creationists</i>	*27.00	21.50
Desmond & Moore, <i>Darwin. The Life of a Tormented Evolutionist</i>	*34.00	27.25	SPECIAL Quammen, <i>The Flight of the Iguana</i>	*19.95	9.00
Dietz & Holden, <i>Creation/Evolution Satiricon</i>	12.95	10.25	Raup, <i>Extinction: Bad Genes or Bad Luck?</i>	*19.95	15.95
Diamond, <i>The Third Chimpanzee</i>	13.00	10.40	Robinson & Tiger, eds. <i>Man and Beast Revisited</i>	16.95	13.55
Ecker, <i>Evolutionary Tales</i>	10.00	8.00	Ruse, <i>But is it Science?</i>	*29.99	23.95
Eldredge, <i>The Miner's Canary</i>	*20.00	16.00	Sagan & Druyan, <i>Shadows of Forgotten Ancestors</i>	*23.00	18.00
Eve and Harrold, <i>The Creationist Movement in Modern America</i>	13.95	11.15	Strahler, <i>Science and Earth History, the Evolution/Creation Controversy</i>	*51.75	41.50
Godfrey, <i>Scientists Confront Creationism</i>	10.95	9.50	Strahler, <i>Understanding Science</i>	*26.95	21.55
Gould, <i>Bully for Brontosaurus</i>	12 10.95	10 8.75	Toumey, <i>God's Own Scientists</i>	15.00	12.00
Gould, <i>Ever Since Darwin: The Panda's Thumb</i> (2 bks, each:)	9.95	7.99	Van Till, Young, & Menninga, <i>Science Held Hostage</i>	10.99	8.75
Gould, <i>Hen's Teeth and Horse's Toes</i>	11 6.95	9 5.55	Webb, <i>The Evolution Controversy in America</i>	*34.95	28.00
Gould, <i>Flamingo's Smile; Wonderful Life; 8 Little Piggies</i> (3 bks, each:)	10.95	9 8.75	Weiner, <i>The Beak of the Finch: The Story of Evolution in Our Times</i>	*25.00	20.00
NEW Gould, ed., <i>The Book of Life</i>	40.00	32.00	Wilson, <i>The Diversity of Life</i>	14.95	11.95
Gross & Levitt, <i>Higher Superstition</i>	25.95	23.95			
Harrold & Eve, <i>Cult Archaeology and Creationism</i>	*24.95	19.95			
Holton, <i>Science and Anti-science</i>	30.00	24.00			
Howells, <i>Getting Here</i>	19.95	15.95			
NEW Jones et. al, <i>The Cambridge Encyclopedia of Human Evolution</i>	34.95	28.00			
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			

!NEW!**"Institute for Pi" video!**National
Center
for
Science
Education

**Evolutionists do it . . .
with increasing complexity!**

Bumpersticker #1

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

*cloth

Poster**Smithsonian Chart of Animal Evolution**

27" x 39 3/8". Accurately and thoroughly shows relationships between terrestrial and aquatic, extinct and extant groups. Geological scale.

List: \$12.00 Member: \$11.00

RESOURCES

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

Boston, Bob. 1994. Failed Crusade. *Church and State* 47(10):9-11, Nov. Details about The Florida "comeback" school board elections where evolutionists ousted creationists.

Bower, Ann. 1994. The Editor's Desk. *The Body Politic*, Jan. Argues that the religious right will focus more on school boards in the future, tending away from the "right to life" campaign.

Cooper, Marc. 1994. Salvation City: God and Man in Colorado Springs. *The Nation* pp 9-12, 2 Jan. Fairly sympathetic overview of the migration of dozens of fundamentalist and creationist organizations to the Springs in recent years.

Culotta, Elizabeth. 1994. Science Standards Near Finish Line. *Science* 265:1648-1649 (16 Sept). NAS science ed reform accelerates under leadership of NCSE Supporter Bruce Alberts.

Desmond, A., and J. Moore. 1994. *Darwin*. NY:W.W. Norton. Paperback ed. of 1991 instant classic. **Hardback version avail. from NCSE at discount—See Centerfold; pb version will be available soon, too.**

Emmeche, Claus. 1994. *The Garden in the Machine. The Emerging Science of Artificial Life*. Princeton: Princeton University Press. 199 pp., \$24.95. Danish theoretical biologist examines "a-life."

Fischman, Joshua. 1994. Putting Our Oldest Ancestors in Their

Proper Place. *Science* 265:2011-2012 (30 Sept). News article reviews new Ethiopian *Homo* fossil finds.

Glen, William (Ed.). 1994. *The Mass-Extinction Debates: How Science Works in a Crisis*. Stanford, CA: Stanford Univ Press. xiv + 370 pp, \$17.95. Well-received book about how science evolves.

Hoyle, Fred. 1994. *Home Is Where the Wind Blows: Chapters from a Cosmologist's Life*. Mill Valley, CA: University Science Books. xi + 440 pp, \$32.50. Autobiography of acclaimed astronomer and science gadfly who delights in challenging orthodoxy (cf., his odd claim that *Archaeopteryx* had no feathers!).

Jukes, Thomas H. 1994. Creationism and the *Wall Street Journal*. *Journal of Molecular Evolution* 39:435. Summarizes recent editorial debates.

McIver, Tom. 1994. A Little Bit East of Eden: Evolution Debate Continues in Santee. *San Diego's Weekly Reader* 3 November, pp. 1, 18ff. (13 pp). Excellent analy-

sis of the ICR Museum of Creation and Earth History. **[Available from NCSE for \$2.00.]**

Moore, James. 1994. Cutting Both Ways—*Darwin* Among the Devout: A Response. . . . *Perspectives on Science and Christian Faith* 46(3):169-172. Book co-author (with Adrian Desmond) responds to critics of the 1991 social biography.

Nesse, Randolph M., and George C. Williams. (1995) *Why We Get Sick*. NY: Times Books. Forthcoming book on evolutionary medicine, called a landmark and instant classic by prepublication reviewers (**members: stay tuned for discount sale offers!**).

Norton, O. Richard. 1994. *Rocks from Space: Meteorites and Meteorite Hunters*. Missoula, MT: Mountain Press Publishing Co., 461 pp, 250 photos; \$20 pb. A 4-lb. list of comets, showers, study labs, impact craters, analyses, etc.

Numbers, Ronald L. (General Ed.) 1995. *Creationism in Twentieth-Century America*. 10 Volumes. Hamden, CT: Garland Publishing. \$732 + 4% shipping. Ca. 75 years' creationist writings. Important research library collection.

Schluter, Dolph. 1994. Experimental Evidence That Competition Promotes Divergence in Adaptive Radiation. *Science* 266:798-801 (4 Nov). Demonstrates a major Darwinian principle.

Soyfer, Valery N. 1994. *Lysenko and the Tragedy of Soviet Science*. New Brunswick, NJ: Rutgers. xxvi + 379pp,

What's Wrong with *Pandas*?

Frank Sonleitner

A revised edition of *Of Pandas and People* is critiqued in detail. A must for schools considering *Panda* adoption! (1994 ms)

RESOURCES

\$39.95. A Russian's new analysis of the Lysenko scandal and legacy.

Walthall, Barbara (ed.). 1994. *IDEAAS: Sourcebook for Science, Mathematics, and Technology Education*. Armonk, NY: The Learning Team, 10 Long Pond Rd., 10504-0217. 256 pp, \$19.95 + \$4 shipping. 1000 organizations, 10,000 resources and programs noted.

Wilford, John Noble. 1994. Theory of Universe's Age Poses New Cosmic Puzzle. *New York Times* 27 Oct, pp 1, B12. Good popular summary of new evidence that the Universe may be "only" 8-12 billion years old despite other evidence pointing to an age of 12-20 billion years.

Wilford, John Noble. 1994. Big Bang's Defenders Weigh Fudge Factor, A Blunder of Einstein's, As Fix for New Crisis. *NY Times* 1 Nov, pp. C1, C10. More on the above.

Woodward, S.R., N.J. Weyand, and M. Bunnell. 1994. DNA Sequence from Cretaceous Bone Fragments. *Science* 266:1229-1232. Controversial claim that fossil dinosaur DNA has been isolated and analyzed.

Yoon, Carol Yaesuk. 1994. The Wizard of Eyes: Evolution Creates Novelty by Varying the Same Old Tricks. *NY Times* 1 Nov, pp. C1, C11. How eyes independently evolved in various lines using the same chemistry in different ways. ♦

Still Available!
C/E Index
by Ken Saladin
\$8 for members

NEW BOOKS

Darwin for Beginners

Jonathan Miller
and Borin Van Loon

The well-known series of witty (but accurate) cartoon books on science (suitable for high school and college students, and above) takes on our favorite English scientist. 176 pp.

The Cambridge Encyclopedia of Human Evolution

Steve Jones, Robert Martin,
David Pilbeam

Now in Paperback! Definitive source of information on primates, genetics, fossils, social behavior, ecology—the works, by Pilbeam, Gingerich, Delson, Wood, Stringer, etc.

The Book of Life

Stephen Jay Gould, Editor

Beautifully-illustrated coffee-table format book traces the past from prokaryotes to humans. Chapters by Sepkoski, Benton, Janis, Andrews and Stringer. hardback.

The Institute for Pi

Classic 1981 videotape revealing the absurd science practiced in the infamous Institute for Pi Research, dedicated to proving the truth of the Biblical dictum that $\pi = 3.0$. Long an underground classic. 25 minute videotape. ♦

"The theory of evolution is less likely to have occurred than Webster's Dictionary having been compiled from an explosion in a print shop."

—GOP Senator George Lovejoy,
NH Education Committee Chairman

New Mac BBS

Tom Atkins (yes, the very same dynamo who's helping out with the FAQs Project) teaches biology and knows very well that classroom teachers are always looking for new ideas. So, he's started a computer bulletin board where teachers can exchange ideas. Tom says some "chat" goes on, but most participants spend their time uploading and downloading files of curriculum materials.

Tom's bulletin board isn't accessible to PC users yet, but anyone with a Mac can join the fun. You'll need to get special software to sign on, either by mailing him a blank diskette for copying the program, or downloading a file he sends in email. For more information, send e-mail to "ThoAtkins@aol.com" (leave out those quotation marks!) ♦

RESOURCES

FREE CATALOGUE OF RESOURCES

The Young Entomologists' Society (Y.E.S.) offers a free directory of educational resources dealing with crawly things—insects, spiders, earthworms, and snails. Books, kits, teachers' guides, videos, games, posters, puppets, t-shirts, and more are listed. Y.E.S. also provides teachers' ideas for using the material. For a copy, or for information about the organization's activities, write YES, 1915 Peggy Place, Lansing, MI 48910-2553.

Scientific American Special Issue "Life in the Universe"

The October issue of *Scientific American*, "Life in the Universe," includes the articles:

Life in the Universe, by Steven Weinberg
The Evolution of the Universe, by J. Peebles, et al.
The Earth's Elements, by R. Kirshner
The Evolution of the Earth, by C. Allegre and S. Schneider
The Origin of Life on the Earth, by L. Orgel
The Evolution of Life, by S.J. Gould
The Search for Extraterrestrial Life, by C. Sagan
The Emergence of Intelligence, by W. Calvin
Will Robot's Inherit the Earth? by M. Minsky
Sustaining Life on Earth, by R. Cates

It was announced in September that long-time *Scientific American* editor Gerald Piels will be leaving that position this year. ♦

Obituaries

Zim Dies

At least if you are an American adult interested in science as a child, one of your three or four or five biggest influences has just died, and you may not even know his name. Asimov is dead, and you probably have another private inspiration or two, but you know their names. Do you know Herbert S. Zim?

You know Zim's work if you have ever tried to identify a rock or star or tree. Zim was the author or co-author of 100+ books and many more articles. His biggest legacy is the Simon and Schuster Golden Nature Guides series of concise, comprehensible guidebooks which

he began editing in 1947 and writing in 1949. His first (non-series) book was *Of Mice and Men* in 1942. His Golden Nature Series books included *Birds*, *Insects*, *Fishes*, and *Trees*, and his non-series 1966 *Birds of North America* is still regarded as a basic guide.

Zim's writings tended to be non-theoretical and descriptive, so some people might argue that they were not on the cutting edge, but they were highly informational and inspirational to millions of kids whom he taught that science was comprehensible and fun.

Zim died at 85 on December 5, 1994. ♦

Beverly Halstead Dies

Dinosaur expert Beverly Halstead died last year in an auto accident, we have belatedly learned. He picketed and leafletted the British Museum (Natural History) several years ago accusing curators of being communists because they mounted an exhibit based on cladistic analysis of fossils. He was also fond of demonstrating reconstructions of dinosaur reproductive "positions" with the assistance of a friend who allowed him to mount her in alleged dino style on stage. He published many scholarly and popular works on evolution, and a festschrift by dinosaur scholars is in press.

Obituaries

LA Creationism Judge Gee Dies

Thomas G. Gee, a retired federal Fifth Circuit Appeals Court judge, died in late October. Judge Gee was best known as the author of the minority opinion supporting the 1981 Louisiana law requiring equal time for creationism. In 1986, the full court ruled 8-7 against the statute, but Judge Gee wrote a strenuous minority opinion on which the state based its appeal to the US Supreme Court. "Highly qualified scientists," he

wrote, believe "evolution is not established scientific fact." Gee's argument was rebuked on appeal in the Supreme Court's *Edwards v. Aguillard* 7-2 decision in 1987.

A West Point Graduate, Judge Gee was appointed to the Appellate Court by Richard Nixon in 1973 and retired in 1991. He died at 69 of amyotrophic lateral sclerosis. ❖

ICR's Richard B. Bliss Dies

Richard Bliss died of a heart attack November 24, 1994 in San Diego. Bliss was Chairman of the ICR Science Education Department and one of the most active proponents of "two-model" origins education in the science classroom. In recent years he had developed "Good Science Workshops" for students and teachers, demonstrating practical "kitchen science" experiments and principles to meetings around the US. In 1994 he and his team led 20 such workshops in nine states. His doctorate in science education from unaccredited Sarasota University was controversial because of its statistical manipulations purporting to show that students learned evolution better when it was presented alongside the "other" model, scientific creationism. Dr. Bliss was one of the most tireless and dedicated of the ICR's core staff.

❖
mutations
can build
up in a
population
without
being
acted upon
by natural
selection
❖

Motoo Kimura Dies at 70

Geneticist Motoo Kimura died suddenly in early November while on the staff of the Japanese National Institute of Genetics. Kimura was world-renowned as perhaps the leading theorist of "neutral gene theory," or the concept that mutations can build up in a population without being acted upon by natural selection. At about the same time as Kimura's development of this theory, NCSE's Thomas H. Jukes and his colleague Jack

King were similarly demonstrating empirically that much more variation occurred than could be accounted for by efficient natural selection. Like Jukes, *et al.*, as a critic of total reliance on natural selection, Kimura was not an anti-evolutionist, although some scientific creationists might cite his rejection of orthodox Darwinism. His best-known book was *Neutral Theory of Genetic Evolution*. ❖

Cyril Ponnampерuma Dies at 71

Dr. Cyril Ponnampерuma, perhaps the best-known scholar of life origins and abiogenesis, died December 20, 1994 of a heart attack. At his death he was Director of the University of Maryland Laboratory of Chemical Evolution since 1971. Earlier he had long been a researcher at NASA's Ames Laboratory after graduating

from UC Berkeley with a Ph.D. in biochemistry in 1962. A native of Sri Lanka, Dr. Ponnampерuma was praised at his death by writer Arthur C. Clarke, a long-time friend and a resident of Sri Lanka, as "the leading authority on the origins of life." Last year the Russian Academy of Creative Arts awarded him the Harold Urey Prize, and earlier he received the French Chevalier des

Artes et Lettres for his international efforts. In October he was named to the Pontifical Academy of Sciences in Rome, and he served as science policy advisor to the president of Sri Lanka. His best-known publication was the book, *The Origins of Life*. ❖

Tracking Those

Transitional Forms

Christine Janis

Visiting Professor of
Geophysical Sciences
The University of Chicago

I was struck by a comment in the article by Arthur Shapiro in the last issue (Vol. 14:3, p. 14) where in reviewing an upcoming creationism book he experienced the nightmare fantasy that he'd soon be hearing cocktail conversation of the ilk "... Did you know that there are *still* no fossil intermediates between men and apes. ..." This got me to thinking if the age-old problem of how to explain intermediates to lay people could be explained by that old game of changing one word into another, one letter at a time. After several minutes of thought, I came up with this "transformation series."

APE-APT-OPT-OAT-EAT-
MAT-MAN

Of course other people might come up with many different series, but this has the advantage of being surprisingly short (especially surprising considering the number of alternative avenues I originally ventured down!)

Now, present-day taxonomy dictates that we have to have a cut-off in this series at some point: at some point we have to decide where the word stops being "APE" and starts being "MAN." (Point out to people that taxonomic classification just won't allow "floating" intermediates.) Where would that cut-off be?

This issue here is that different people might put the cut-off at different points. The "creationist" view might be that it's not "MAN" until all the letters are present (thus cutting out australopithecines and other *Homo* species). However, this leaves the problem that most of the previous words don't strongly resemble "APE" either. There could be an argument for making the cut between any pair of words. Between "APT" and "OPT" (with losing the "A" being the critical issue) would be a "low-down" cut-off (perhaps analogous to including all the australopithecines as "MAN"). Between "EAT" and "MAT" (with gaining the "M" as the critical issue) would be a "high-up" cutoff (perhaps analogous to including fossil *Homo* species in "MAN" but not the australopithecines). Or the transition form "OPT" to "OAT" could be seen as the critical functional transition, solving the hard part of the word game from replacing a consonant in the middle of the word with a vowel (I have no analogies here, but it actually makes more "evolutionary sense" in terms of how one figures out these word puzzles!)

(For a more PC, feminist approach, someone other than myself could figure out how to transform CHIMP into WOMAN!)

The same series could also be used to demonstrate how the incompleteness of the fossil record also causes biases and difficulties. If you asked someone else to do this word game they would take a much shorter time than my ten minutes or so if you gave them "part of the puzzle": e.g.

APE———OPT———
EAT———MAN

However in this case, the missing words that they fill in would be "predicted fossil occurrences" of intermediate stages that might be discovered in the fossil record in future times. An example here would be the recent discovery of *Australopithecus ramidus* (White et al., 1994, *Nature* 371:306) which is much more chimpanzee-like than previously known australopithecines (although whether it is analogous to the missing word "APT" or to "OAT" I am not at liberty to say!) ❖

Tabloid News—Its Not All the Same

While they may share the same cavalier attitude towards journalistic integrity, supermarket tabloids differ in content. A study by Bob Ladendorff in *The REALL News* (Nov. 1994) shows that the *National Enquirer*, *Star*, and *Globe* concentrate primarily on stories about celebrities. The *Sun* and *Weekly World News*, in contrast, emphasize oddities, pseudoscience, and misc. similar articles. In other words, people read them with different objectives in mind. The latter two papers commonly report on biblical mysteries, Ark sightings, Neandertals from outer space, and the like—material in the general orbit of anti-evolutionism and the sensationalizing and mocking of science. Both flavors of tabloid contribute to the public's inability to judge claims critically (or to understand that all claims are *not* equal).

Incredible Creationists

Charles Darwin's Deathbed Conversion

Andrew O. Lutes

Mansfield, OH

Two common contentions about Charles Darwin and religion are that he was excommunicated from the church and that on his deathbed he recanted his life's work. Both are erroneous.

Darwin grew up in the Church of England and studied to become part of its clergy before eventually leaving his seminary and becoming a naturalist. While he eventually became an agnostic and ceased attending services, he was never excommunicated from the Anglican Church. After the Huxley-Wilberforce debate, the Church came to accept theistic evolution into its theology and did not regard evolution as heresy. Far from excommunicating him, the Church of England accepted him for burial in Westminster Abbey!

The fable of Darwin's deathbed conversion or recantation originated with one Lady Hope, an evangelist in Darwin's neighborhood, who told a Moody evangelical school that Darwin was reading the Epistle to the Hebrews, denounced evolution and agnosticism, asked to have singing and worship near him, and converted to Christianity before dying. This story is not true. Lady Hope was not present at Darwin's deathbed. Those who were there say he died thinking as he had most of his life, his words near his end being "I am not the least afraid to die." Witnesses say he did not recant his evolutionism or

agnosticism or convert to Christianity. Lady Hope was promoting a complete fabrication. After quoting her claims at length, the *Bible-Science Newsletter* (27(9):12, 1989) notes that this is a myth, as William Rusch also noted in the *Creation Research Society Quarterly* 21(1).

There are many stories of free-thinkers recanting on their deathbeds: Voltaire, Thomas Paine, Robert Ingersoll, etc. Ingersoll's family was obliged to proclaim, again and again, that, contrary to

rumors, he had not recanted—and that he had not committed suicide. It seems that if some people cannot convert you in life, they still try to claim you after death!

These deathbed myths are discussed by Tom McIver in "Ancient Tales and Space Age Myths of Creationist Evangelism" (*Skeptical Inquirer* 10(3): 266-268) and various Darwin biographies such as *The Survival of Charles Darwin* by Ronald W. Clark, Avon Books, 1984. ❖

Darwin and the Whale

In later editions of his *Origin* Charles Darwin made many changes from the first edition, many for the worse. For its raw insight, scholars usually consider the first edition the best one, even though it is usually not in print. Creationists have made great mileage from claims that Darwin could not explain whale evolution. In a letter to the *New York Times* (5/16/94) University of Tennessee zoologist John L. Gittleman points out that Darwin originally wrote, "In North America the black bear was seen . . . swimming for hours with widely open mouth, thus catching, like a whale, insects in the water. Even in so extreme a case as this, if the supply of insects were constant, and if better adapted competitors did not already exist in the country, I can see no difficulty in a race of bears being rendered, by natural selection, more and more aquatic in their structure and habits, with

larger and larger mouths, till a creature was produced as monstrous as a whale."

Darwin was not describing specific whale evolution—just how the process of natural selection could work on a land mammal. Professor Gittleman observes that Darwin later regretted omitting this passage from later editions. Of course, creationists have to be relieved, because this omission has long given them an imaginary wedge, and a clearer brief example of Darwin's mechanism of natural selection would be hard to find. ❖



Keeping Tabs

Waldorf Schools Teach Odd Science, Odd Evolution

Eugenie C. Scott

Milwaukee public school funding is going to a "Waldorf School"—part of the movement begun by Rudolf Steiner. Waldorf schools are supposed to teach that "Man is not the result of animal evolution."

According to the *Milwaukee Journal* magazine, *Wisconsin*, the Waldorf program is "the largest and fastest growing non-sectarian school movement in the world" (1/12/92, p. 16). The vast majority are private schools, but Milwaukee has instituted a public Waldorf school as one of a series of experiments to try to improve student performance. Other school districts are exploring the idea, and NCSE members should be familiar with what may be in store for science education in this setting.

Waldorf Schools are based on the writings of Rudolf Steiner, the 19th century founder of "anthroposophy." Anthroposophy is an outgrowth of the theosophical movement popular in the early 20th century, a "spiritual" approach to philosophy. The Waldorf approach is infused with "spirituality," which in some treatments becomes a hazy version of religion. Religious people consider it objectionable because it undermines religion by not going far enough: in effect substituting a mushy sense of the supernatural for religion; nonreligious people are offended because Waldorf quasi-religious

"spirituality" is so clearly religious!

The Waldorf approach includes some ideas that many educators would consider attractive. It is a "developmental" approach to education, in which the individual student's emotional and intellectual development is considered in the development of curricula. One teacher stays with a group of students for several years. The approach integrates art and music into the everyday curriculum, rather than treating them as "specialties" taught irregularly. There is much manual manipulation; a typical Waldorf activity, for example, is knitting, for both boys and girls. Students learn a foreign language in elementary school. Creativity is given emphasis over rote learning.

But if schools follow Steiner's views on science, education will suffer. Steiner believed that materialism was insufficient for the understanding of nature. He believed that science needs to "go beyond" the empirical and consider vitalistic, unobservable forces, a perspective also common in 20th century New Age healing approaches. Anthroposophical medicine, similar to homeopathy but even less scientific, claims that disease is caused only secondarily by malfunctions of chemistry and biology, and primarily by a disturbance of the "vital essence." Anatomy and physiology à la Steiner are unrecognizable by modern scientists: the heart does not pump blood; there are 12 senses ("touch, life, movement, equilibrium, warmth, smell," etc.) corresponding to

signs of the zodiac; there is a "rhythmic" system that mediates between the "nerve-sense" and "metabolic-muscular" systems. Physics and chemistry are just as bad: the "elements" are earth, air, fire, and water. The four "kingdoms of nature" are mineral, plant, animal and man. Color is said to be the result of the conflict of light and darkness. Typical geological stages are Post-Atlantis, Atlantis, Mid-Lemuria, and Lemuria.

Waldorf teachers are supposed to teach Steinerian evolution. In this view, species were specially created, rather than evolving from one another, and "spiritual beings were the creators." "Let us start from the point that the gods, or the divine spiritual beings, decided to create the world and man. For this we have a good authority in the first chapter of the first book of the Bible." (All quotes from a teachers' training manual by Roy Wilkinson, *Man and Animal*, The Robinswood Press, Stourbridge, England, 1990, p. 2-3, provided courtesy of NCSE member Dan Dugan.)

The Waldorf version of evolution is especially concerned with the relationship of humans to animals, but this relationship is quite different from that of mainline evolutionists. "It becomes apparent that man is a compendium of the animal kingdom; alternatively expressed, that the animal kingdom is the human being spread out." The human "essence" passed through a number of "spiritual states" on the way to

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❖

Keeping Tabs

becoming human, which was a relatively recent event.

"Dr. Steiner considers animals to be the by-products of human development. Man has been involved from the very beginning but not in a physical form. Man existed spiritually, and the animal forms represent physically incarnated soul forces which the human being had to dispense with in order to mature sufficiently to receive the ego. . . . As in life . . . we are trying to overcome the lower passions to evolve to something higher, so throughout evolution, the passions were separated out from man, and these were incorporated as animals.

"We see then that man is not the result of animal evolution but that he is at the beginning of it and is central to it. Indeed he is the cause of it. The animal world represents soul qualities which the human being has discarded although he still retains remnants of them."

Steiner's teachings on race are also unscientific. Books authored by Steiner still being sold at Waldorf schools make claims such that "If the blonds and blue-eyed people die out, the human race will become increasingly dense if men do not arrive at a form of intelligence that is independent of blondness" (written in 1922). Waldorf schools tend to have a touchy-feely atmosphere that we don't usually associate with White Aryan Resistance doctrine, so it is not likely that racist propaganda of this sort is being taught, but it is not at all clear that proponents of Steiner's philosophy have publicly repudiated such views. Something upon which aficionados of Steiner's philosophy should reflect is that if he was so dead wrong about genetics and racial variation in general, couldn't he also be in error regarding other supposedly "scientific" teachings?

NCSE would be interested in hearing from our members about the expansion of the Waldorf movement in the US. To what degree is Steiner's philosophy taught, as opposed to his methods, some of which may be useful? One NCSE member, Dan Dugan, investigated the Waldorf school his son attended and found that although teachers claimed that only Steinerian methods were used, the pseudoscientific content of Steiner's views also crept into the curriculum. Surely there is value in an educational system that promotes spontaneity, creativity, expressive arts, and enthusiasm in children, but such an approach should not denigrate a more materialistic, scientific way of knowing, which has proven its usefulness. Both are necessary for good education. ❖

Microevolution on the 700 Club

John Cole

The Christian Broadcasting Network, run by evangelist Pat Robertson, is one of the prime sources of creationist television appeals across the US and even worldwide. (CBN recently negotiated an exclusive contract for cable television services with the government of Vietnam, for example.) Robertson himself practices faith healing and is a font of other health advice for Biblical literalists.

A July 12, 1994 *700 Club Newswatch* broadcast addressed "Superbugs: Has Medical Tech-

nology Created a Monster?" After a brief discussion of the overuse of antibiotics, their "Fact Sheet" reports that "bacteria that survived the antibiotic onslaught evolved into a new strain that most antibiotics can't kill. Already there are new strains of tuberculosis, pneumonia and gonorrhea that are invulnerable to the same drugs that only a few years ago destroyed them." (Yep—"evolved.")

This classic example of natural selection in action is then dismissed. Pat Robertson responds: "God made our bodies resistant to bugs because bugs have been here forever. But we have to eat healthful food, we have to have

a lot of vitamin C and vitamin A. . . . Also, the Bible says that a merry heart doeth good like medicine." He goes on to comment that only faith will conquer the newly evolved superbugs and to give the address for brochures and epidemiological information at the National Foundation for Infectious Diseases, 4733 Bethesda Ave., Suite 750, Bethesda, MD 20814.

One of the reasons many creationists insist on a very young Earth is that they do realize that evolution is currently taking place, and they desperately need a very short time span or else evolution would seem to work, after all. ❖

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Keeping Tabs

ICR's Kuznetsov's Suspect Science

John Cole

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"someone
else's
problem"
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One of the very few antievolutionist claims published in a mainstream scientific journal in modern times seems to be erroneous or even fraudulent. Uppsala University (Sweden) Professor Dan Larhammar reports in the March issue of the *International Journal of Neuroscience* that Dimitrii Kuznetsov's 1989 article in that journal is riddled with errors, faulty conclusions, and apparently fabricated references used to bolster an antievolutionist argument. Larhammar's detailed analysis is summarized in *Creation/Evolution* 35 and the March/April 1995 issue of *Skeptical Inquirer* (in press).

Dimitrii Kuznetsov has been a rising star at the Institute for Creation Research in recent years: He holds a Ph.D. and has published in peer-reviewed journals, for example, but most dramatically he is a Russian scholar and winner of a Lenin Prize who has seen the error of his ways and embraced antievolutionism. He is often said to be "not a creationist or fundamentalist," and his past Communist-related credentials seem like a resounding example of how an atheistic scientist of great renown could independently come to the same conclusion as long-time ICR people who are so often accused of letting their religious presuppositions bias their research. But Dimitrii? No way!

Larhammar's exhaustive (and no doubt exhausting!) research of this creationist claim is commendable, but the fact that no one else bothered to check the facts for about six years points up a serious problem in science: Despite the rhetoric about the nature of science requiring "refutability," etc., it is tempting not to bother refuting what one at first glance thinks is "someone else's problem." This lets stand many claims far longer than necessary because scholars spend most of their time working on their own interests rather than looking at odd things and saying, "hmmmm. . . ." (Fans of

Douglas Adams' five to seven-part trilogy on the *Hitchhiker's Guide to the Galaxy* may recognize the classic "Somebody Else's Problem Field" at work here, a previously-unnamed phenomenon epitomized by Adams' account of a space ship landing in Wembley Stadium during a crucial cricket match but which went unreported because everyone there was affected by the Field.)

Larhammar's expose of Kuznetsov is meticulous and startling. Neither the ICR nor Kuznetsov have commented yet, to our knowledge. ❖

GOP Leader vs. Barry Goldwater: "Economic" and "Cultural Conservatives" Should Agree

John Cole

In a *Policy Review* article (see Resources), Congressman Dick Armey attacks conservative icon Barry Goldwater for criticizing Jerry Falwell and "cultural conservatives" for dividing the Republican Party and threatening to inhibit personal freedoms. Goldwater had said that he'd like to kick Falwell "in the butt" for his endorsement of what the ex-Senator considered extraneous issues.

In a long article, Armey counter-attacked, maintaining that "economic conservatives" should not oppose creationism

and should embrace local choice, parental choice, states' rights, etc., against mandates from the Supreme Court or other national offices. He cited scientific creationism as a good example of a topic which was not the business of courts or the government. Rather, it is one of many issues which should be left to local community control, neither mandated nor restricted by governments at higher levels.

Armey's office has become active in promoting support for the Christian home schooling movement. The 1994 election has catapulted him into the House leadership. ❖

Letters

Focus on Dobson?

Your info about James Dobson (*Reports* 13(3):21) is pretty shaky. First of all, he certainly is a creationist but not at all a creation-science enthusiast. He does not frequent creation-science meetings, as you say. His own antievolutionism concerns are on a totally different level. He does not support, financially or otherwise, any of the rabid anti-evolutionary organizations. Overall, your comments come across as overly harsh as well as poorly informed. Why sound so much like the "opposition" in using their tactics? Our work is too important.

(Name withheld)

Ed: This is one of a dozen or more letters excited about my

"attack" on Dobson which made me go back to see what in the world I had said. Turns out, I simply was trying to report on the huge fundraising successes NCSE confronts as David vs. Goliath. Dobson is indeed a fundraising goliath, and he has in fact been quite active in promoting anti-evolutionism in his broadcasts and publications. He has publicized various creationist causes and highlighted and endorsed the anti-evolutionism of Phillip Johnson (including a 2-day Johnson series advertised for Feb. 1995). I did not mean to imply that his primary interest was scientific creationism, but it is one of his interests; that he brings in multiple millions of dollars should not, I agree, be equated with support for creationism on a 1:1 dollar basis.

Ev and Origins

I enjoy *NCSE Reports* and admire David Bloomberg's (13(4)/14(1):29) attempt to debate creationism. However, his statement that a particular creationist "confused the theory of evolution by suggesting it dealt with the rise of life from non-life" is questionable. Only strict neo-Darwinists still believe that evolution cannot occur without genes and that the development of the organic from the inorganic was not evolution. Rock formations evolve. Planets evolve. Whole galactic systems evolve. Nothing in the Universe escapes evolution (cf., G. Borchard, 1984, *The Scientific World-view*, P.S.I., Berkeley, CA). Our educational mission need not sacrifice scientific principles for still another compro-

mise with creationist gobbledygook.

Glenn Borchardt, Director
Progressive Science Institute
PO Box 5335
Berkeley, CA 94705

NCSE Dangerous?

Thanks for your work, but make sure you don't reveal my name or address—my sister sends your stuff to me where I teach because I don't dare subscribe directly. It's weird that NCSE is more scary in a small town than a porno subscription, isn't it?! But it's probably the same in a lot of places and you don't hear about it.

Colorado Teacher

Citizens for Excellence in Education

John Cole

In response to several inquiries about my oblique criticisms of a good-sounding group called Citizens for Excellence in Education, we should note who or what it is. The following quote from a March 6, 1993 speech by CEE president Robert Simonds in Glen Mills, CA, quoted in a December fundraising letter, illustrates their agenda: "We are a great threat to the public schools; we may have to get rid of them."

CEE is the "citizen" arm of NACE—The National Association of Christian Educators. NACE's goal is to train public school teachers in ways to bring Christianity into the classroom via such things as teacher profes-

sions of belief, explanations of various subjects, from science to literature, in terms of Biblical literalist Christianity. They have been active in running and sometimes electing school board candidates around the US via their CEE alter ego.

CEE is rather like a number of religious right education "reform" groups which basically want to hand public schools over to the control of anti-evolutionist fundamentalists. Creationism comes and goes from their public agendas but remains on their "things to do list."

Hence NCSE's occasional (and accurate) reference to them as creationists, despite their lofty-sounding name! ♦

Aardsma Resigns from ICR

Gerald Aardsma resigned in Fall 1994 from the faculty of the ICR Graduate School where he was Assistant Professor of Astro/Geophysics. The University of Toronto Geophysics Ph.D. was said by ICR to be turning to full-time research on Biblical chronology. Aardsma had raised some creationist eyebrows by suggesting that his understanding of isotope decay rates indicated that the ICR young Earth dogma might be erroneous. He published a tentative measure of 12,000 years as the age of the Universe, not the 6-10,000 typically claimed by ICR spokesmen. The difference seems ludicrous to most scientists, certainly, but Henry Morris and others reportedly were uncomfortable with Aardsma's revisionism. For example, Morris added a disclaimer to Aardsma's ICR-published book, *Radiocarbon and the Genesis Flood*. Aardsma also did not sign off on a M.A. thesis in "Astro/Geophysics" which attacked post-Newtonian physics, although the student was awarded the degree anyway.

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