

REPORTS

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Winter 1992



Superintendent Bill Honig May Not Appeal

California School Reformer Convicted

John Cole

(Compiled from San Francisco Examiner, San Francisco Chronicle, Oakland Tribune, and New York Times reports)

California court convicted Bill Honig of felonious "conflict of interest" on January 29, 1993, as we go to press. Sentencing was scheduled for late February.

Honig initially vowed to appeal and to continue in office until forced out—one of the penalties of a California felony conviction in addition to possible incarceration is removal from office and a lifetime prohibition against

holding public office again. Later, Honig indicated that he might resign and forego an appeal, because of the cost involved, if the conviction were reduced to a misdemeanor. His attorney said he was anxious to get back to work as an educator and did not realistically expect to seek further public office.

The trial judge had ruled inadmissable any evidence or argument about Honig's mo-

Honig, continued on p. 11

Suburban Chicago High School Teaches Creation Science

Ranse Traxler

Wheeling High School District #214, in suburban Chicago, considers creationism to be as scientific as evolution.

For some time now, teacher Terry Mondy has been teaching creationism to his students as a scientific alternative to evolution. He has, in fact, publicized his success in creationist publications. On April 29th [1992] I made two telephone calls to the district, identifying myself as a reporter for the National Center for Science Education, national "parent" organization to the St. Louis Association for the Teaching of Evolution I direct.

I first spoke with Donald Haid, Associate Principal. He stated, "We allow Mr. Mondy to teach creationism in our school. We have developed a policy which allows teachers

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Copyright © NCSE, Inc. 1993 ISSN: 1064-2358 oo much news is an editor's dream, and we have a lot for this issue—reports from various battlegrounds, news about evolution education, etc. Too much to include everything, in fact, so I try to balance various topics of varying degrees of interest to large and small parts of the NCSE constituency. NCSE deals daily with small crises which never make it to the national media, and there are even more situations we don't hear about in the first place.

But more news is needed. As always, we need to hear from readers about local controversies. Requests for information or help or notices of immediate problems should be sent to the Berkeley office rather than me—I edit a quarterly newsletter, not the NCSE "Hotline"—I hear from Genie Scott, of course, and I also appreciate direct reports.

LEXIS is a national (US) computerized news service dealing with daily legal issues such as lawsuits, court decisions, legislation, etc. Do any of you subscribe? If so, NCSE would be very grateful for any information you might discover by checking out a few of the usual suspect keywords such as creationism, origins, evolution, science education, equal time, etc., as well as the newer versions of legal action and terminology which tend to eliminate direct references to creationism, even though that is their basic topic. Some of the latter topics might include references to "free speech in science" and other phrases most of us would tend to endorse; the problem is that creationists are using more sophisticated terminology to cover the same old agenda, and that is where NCSE gets interested.

So if you're a lawyer or computer junkie in touch with LEXIS (or NEXIS), your help in monitoring legal issues would be invaluable. We can't afford this on our own.

Similarly, other commercial computer databases are beyond our means. If you subscribe to any news network, I hope you will keep your computer's eye peeled for news about creationism, antievolutionism, science education controversies, etc. and don't assume we "already know about this." We try to stay on top of the news and report back to members, but we need individuals' help—direct, local reports and copies of news reports on computer databases, AP, UPI, Reuters, etc. newslines, and from any other source.

SO—Please send your news to NCSE, and if you have access to computer data, I hope you will share it. And good old clippings are always welcome.

The long-awaited *Creation/Evolution* Index will go to press in February 1993 and will be mailed free to subscribers in good standing in March. Its 76 pages are a detailed guide to the first 25 issues, 1980-1989.

John Cole

If you are drafting or revising a will or insurance policy, please consider naming NCSE a beneficiary. Your support can continue far into the future, and NCSE's 509(c)(3) IRS status might provide some benefits to your estate, as well.

Creationism in Turkey

John Cole

conference on "scientific" creationism convened in Turkey in October 1992. A predominantly Muslim nation, Turkey has officially been a non-sectarian state since the days of Ataturk who led the conversion into modernity out of the ashes of the Ottoman Empire after World War I. Even earlier, Turkey granted sanctuary to Jews forced out of Spain in 1492 and has long considered itself religiously tolerant and diverse in a volatile region.

Duane Gish and John Morris represented the American Institute for Creation Research at the conference, as reported in the ICR's December 1992 Acts and Facts. Cautioned against Christian evangelizing at the meeting, the ICR speakers say they decided to attend, anyway, in order to share their experience with Islamic colleagues whose research on creationism they wanted to encourage. Acts and Facts reports that 2500 people attended the conference and that many leading scientists and educators seemed to come around to the need for equal-time education. They report that they advanced the cause especially well in personal meetings and discussions not on the program itself because Muslims deserved to hear their message at least as much as "theists, agnostics, or New Agers in this country [USA]."

Also, writes Morris, "By seeing that Christian scholars rather than Muslim were in the forefront of creation research, perhaps a curiosity would be awakened about Christianity among Muslims." As usual, the "scientific" creationists acknowledge themselves to be missionaries more than scientists, even when asked to attend a religious conference and implored to avoid proselytizing.

ICR reports that "sometime in the 1980s" the Turkish Minister of Education called them for help in eliminating the "secular-based, evolution-only teaching dominant in their schools and replace it with a curriculum teaching the two models, evolution and creation, fairly." ICR books were then translated and "distributed to all Turkey's public school teachers."

Unlike scholars used to cooperating with colleagues from other cultures and religions, ICR people seem to be very worked up about participation in this conference sponsored by Muslims. The December *Acts and Facts* also includes an article by John Morris, "Do Muslims Believe in Creation?" Sort of, he says—and he concludes that "Christians" should

use convergences with the Koran as a wedge to facilitate evangelism among Muslims. This kind of conclusion will surprise anyone working for ecumenical understanding and cooperation in religion and multicultural cooperation and respect among scholars. (Perhaps we should not reveal this trade secret, but scientists just do not behave this way—they cherish opportunities to learn from others rather than trying to convert their religious beliefs!)

NCSE invites information from readers about this and other similar activities reported by the creationists in North America and elsewhere. Are such reports accurate? Complete? We know that some aspects of creationist reports are ritualistic and biased ("Dr. Gish won the audience over when he revealed that there are no transitional fossils"), but their accounts of meetings held, books translated and distributed, missionary work in sensitive political arenas, etc. are potentially checkable.

What can you add more substantively?

We are interested, of course, in any information about efforts by "scientific" creationists to cooperate with or infiltrate social or political movements or religious organizations in America. We are particularly interested in information about creationist efforts to cooperate with or infiltrate Islamic fundamentalist movements or involve themselves in other foreign policy and political issues. All such activities can be politically explosive.

INDEX TO ISSUES 1-25, 1980-1989. Ken Saladin's 76 page Index to C/E is now available! It will be sent **free** to subscribers in good standing ca. March 1, 1993; copies are \$10 each to others.

ICR books
translated
and
distributed
to all of
Turkey's
public
school
teachers

Letters

Appreciates NCSE

Keep up the good work. I really enjoy *Reports* as well as the *Creation/Evolution* journal issues.

Jim Cherry Springdale, AR

It's nice to hear, since complaints are more likely to spur people to write!

Corrects Description of "The Flood Impact"

The description of "The Flood Impact" by Kristan-Tollmann and Tollmann (12(3:17) [summary available from NCSE for \$2.00] is incorrect. Contrary to the item, they do not argue for a young Earth. Their paper discusses evidence for a global flood ca. 9545 B.P. caused by the oceanic impact of fragments from a disintegrated comet. They mention that mankind has witnessed over 100 other impacts, the most catastrophic one having occurred some 700,000 years ago when Australopithecus disappeared.

The paper may be "out of left field," as you state, but it has nothing to do with "young earth" arguments. The comparison with Velikovsky is not appropriate, either, because his catastrophes involved the near collision of planets in historical times, not the direct impact of comets in prehistorical times.

It is cause for concern when a publication that advocates "good science" against creationism distorts the content and argument of a scientific paper. The Tollmanns' paper has more in common with Clube and Napier's work than Velikovsky's. [See **Resources** for references.]

Leroy Ellenberger St. Louis, MO

A couple of lines can never be a definitive review or summary. I didn't intend to be misleading but rather to note an article "out of left field" which was NOT from creationists yet argued for a (relatively) recent, world-wide flood, date independent of young-earthers who might jump on it with glee. Similarly, the Velikovsky comparison seemed fair, given the brief format—I did not mean to equate the arguments. Most scholars now accept an important role for impacts on life on Earth from outer space by comets, meteors, or whatever, but the exact roles are hotly debated; and a major impact and world flood within the past 10,000 years is definitely not "orthodox."

Hellfire?

When you die you will go to Hell and oblivion, you're intolerant and will be punished, you idiots who refuse salvation Dr. Morris offers, praise Jesus. We'll watch your agony for eternity as you suffer endless torture and enjoy it in the rapture while you suffer pain without end.

(unsigned) NJ postmark

No one loves an editor, I guess....

Clintonology

If you examine the January 4 issue of *Time Magazine*, with Bill Clinton on the cover as Man of the Year, you'll find in the photo-story a picture of the President-elect sitting at home in front of several shelves of his books. Easily visible among them is *The Hominid Gang*, by Delta Willis. Hope this portends good things for science teaching in America!

Jonathan Marks Yale University New Haven, CT

"Foreign" Subsidies?

[Many US residents cannot afford subscriptions to NCSE. However, a few thoughts about foreign subscriptions]:

- Consider requesting special donations to help fund overseas mailing, especially from members in wealthier nations like the US.
- Consider subsidizing subscriptions more in countries with greater financial problems like the former Soviet Union and less in wealthier nations like Canada.
- 3. Consider encouraging members to set up sister groups in [other] countries or regions, following somewhat the example of the religious groups. Access to one computer with paper for printing, if the funding is provided for it is provided from subscription costs, might be [costeffective]. If not that, then

sister groups could at least function as a relay point, assuming that there are enough members in that [new] region or nation where sending [information or *Reports*] could be distributed overseas in bulk and then distributed where they need to go.

I don't know if any of this would work or not, but I had to try. Again, Great work to everyone at NCSE!

> Betsy McCall Concord, OH

More on Subsidies

Subscribers everywhere can need subsidies. I'm a teacher laid off in January '92 trying to feed my family with minimum-wage jobs now that Unemployment Ins. has ended. I still sometimes meet with my former biology students and with others who need NCSE info. NCSE will be at the top of my list when I can afford to subscribe again, but meanwhile I'm on your list of aboutto-be-terminated. Is there any possibility of a subscription price on a sliding scale, based upon ability to pay?

Anonymous (Massachusetts)

I'm very sympathetic and don't know the solution. NCSE needs major contributions, an endowment fund and grant funds, since by definition we serve a lot of people who can't payfor the service! But we also serve people who can pay but don't because "someone else will." One suggestion: Convince your local library to sub-

Letters

scribe. And convince your (former?) teacher union and colleagues to convince schools to subscribe and/or subsidize such subs. Ask colleagues to subscribe.

The Phillip Johnson Phenom
If I understand UC Law Prof.
Phillip Johnson's position

Phillip Johnson's position ... it is that divine intervention is not just permitted in scientific explanation, it is mandatory. Does Mr. Johnson apply this principle to his own field, the law? Today, legal matters are supposed to be decided rationally, by the evidence and principles of law. In earlier times appeal was made to to divine intervention-via trial by ordeal and trial by combat [for examples]. Would Mr. Johnson have the law return to the same dependence upon miracles that he demands of science?!

Or could it be that he believes in reason in a field with which he is qualified or familiar and in magic in a field where he is demonstrably ignorant? Believing in miracles is in some ways easier than thinking, and certainly faster.

> Bob Trent Hardinsburg, KY

Old Earth Creationism

About a year and a half ago I became aware of an organization called "Reasons to Believe," which was founded by Hugh Ross, who has a Ph.D. in astrophysics from the University of Toronto. They publish a quarterly newsletter, Facts and Faith. Ross has no problem

believing the Earth and Universe are billions of years old, unlike the ICR people. Nonetheless, Ross and his people are firmly in the evangelical Christian camp and endorse the concept of Biblical inerrancy. They have little, if any, sympathy for the concept of biological evolution or naturalistic origin of life without divine intervention.

They argue against evolution scientifically. Their arguments cite very technical literature and claim that articles in Nature, Science, NAS, etc. disprove the major claims for evolution and especially for naturalistic life origins. Could NCSE analyze these claims so the truth could come out? Why not scholarly and reasoned national TV debates, since the issues are so important? Resolve things in the free and open marketplace of ideas. How could truth lose?

> Doug Whiteside Belvidere, NJ

There are very many "Old Earth Creationists," including many who use some of Ross's approaches—some members of the American Scientific Affiliation, for example. NCSE publishes more articles critiquing "Young Earth" claims because they have been the most common ones being thrust at public schools, but we have published many items which do what you propose. In C/E 31, NCSE Exec. Dir. E.C. Scott analyzes the claims and style of lawyer Philip Johnson, demonstrating why legal-style debating is not really appropriate for scientific "debate" which is an ongoing analysis rather than a determi-

Chicago continued from p. 1

to present all sides of controversial issues to the students. All our teachers have the green light to teach creationism. I know that Mr. Mondy is a creationist and that he has been teaching creationism as science."

Then I called Dr. John Hillary, Director of Curriculum for the high school district. He told me, "I believe that creationism is as much science as evolution [is]. They both can be taught in the science classroom as long as they are presented as theories. We believe that our students are old enough to be given freedom to decide for themselves what to accept as science. Our curriculum is based on what the parents of our students said they wanted and not wanted the students to be taught."

I asked him if he was aware of the recent ruling of the US Court of Appeals for the Chicago District that stated teaching creationism in the public schools was "religious advocacy." He said, "No." I asked him if he was aware that in 1987 the US Supreme Court ruled that teaching creationism in our public schools was unconstitutional. He again said "No." I asked if in astronomy classes, astrology is taught, if in chemistry alchemy is taught, and if in ancient history classes Noah's Flood is taught as an historical occurrence. Dr. Hillary replied, "I don't know if any teachers do so, but if they want to, they can, due to our policy on

controversial issues." At this point he became too hostile to continue and finished by saying, "We're not teaching religion in our schools. We're teaching the creationist theory. Evolution and the Big Bang are just theories, too, and we present all theories to our students."

Mondy has made a videotape in which he portrays two characters, "Professor Evolution and Dr. Creation," debating "origins." He describes this at creationist conferences as "endorsed by the Illinois Science Teachers Association." The September 1988 Moody magazine (p.27) uses this phrase, also, but I checked with the ISTA where an official told me they had never endorsed it and definitely would not do so. Mondy had advertised it in an ISTA publication, but when they determined its nature refused to accept further paid advertising; perhaps this is the nature of "endorsement" Mondy claims—that they let him advertise until they caught on.

The Chicago ACLU has investigated this situation; in fact, the school officials brag that the only complaint about Mr. Mondy has been from the ACLU, and they couldn't touch him. "It's like any school district in the country," an ACLU official told me. "Nothing can legally be done about this, even though its definitely illegal and unconstitutional, until somebody in the school district has the courage to speak out."

While We Were Teaching Evolution . . .

William Thwaites

Department of Biology, San Diego State University

any of us in academia think that devoting class time to the evidence for evolution will eventually fix the creationism problem. In the very long run this strictly academic approach might pay off. But the problem for the foreseeable future is political in nature.

The La Mesa/Spring Valley School District just east of San Diego is a case in point. They were account.

The La Mesa/Spring Valley School District just east of San Diego is a case in point. Two years ago a low-profile large-scale effort by the religious right managed to get two candidates on the five member school board (see *Reports* 12(3):1). This year three seats were open and the fundamentalists again had a slate poised to take all three.

But unlike two years ago when the forces of moderation were caught off guard, this time we were ready. Just after the last election a colleague's wife helped found a group called "The Mainstream Voters' Project." It published lists that exposed the endorsements of the religious right candidates. It also researched issues and backgrounds while working closely with the media. Another group with similar goals participated by screening moderate candidates for competence and commitment. This group then published a list of recommended moderate School candidates.

The La Mesa/Spring Valley District had its own committee for moderation. This "Community for Responsible Education" organized the best of the moderate candidates into a slate which pooled its resources and advertized together.

Still other organizations, such as the American Association of University Women, published lists of candidates backed by teachers as well as those identified as religious right. My wife and I walked a precinct, participated in a phone bank, helped organize a meeting for moderate candidates, and wrote letters to the editor of the local paper.

When the election results came in, we found that all three of the moderate slate had been elected. Because of these efforts, a slim majority of the LM/SV board will be adverse to teaching bogus science in the name of religious morality.

But not all the races had a happy ending. The Vista School District, just north of San Diego, was captured by fundamentalists, who included even an employee of the Institute for Creation Research [See nex issue].

Now we have to start working on the next election. There *is* hope. The voices of moderation still represent a majority of the electorate. And, yes, we are arguing for logic and reason, but we have one big disadvantage. None of us thinks we will burn in hell if we give up and let them have the public schools. We are not a religion and they are. Our motivation must come from such secular concerns as wishing to remain economically competitive, thinking that humanity is better served by reason than by dogma, and not wanting our country to look silly and superstitious.

Discover's Top 50 1992 Science Stories

The January 1993 *Discover* magazine is largely devoted to its annual survey/review of the preceding year's science news. The cover features a rampant sickle-clawed dinosaur and teasers on "closing in on the origin of life," "the flat-faced mystery [earliest *Homo*]," and "creation's uneven glow."

Yes, once again "NCSE topics" seem to have more than their share of newsworthiness!

There are three stories on human evolution, several on evolution-of-the-Universe topics, three dinosaur stories, and items such as the genetics and evolution of sexual orientation, RNA, and AIDS. The discovery of lost Galapagos Islands and three other paleontology articles and a number of items on biology and genetics should also of direct interest to readers.

Discover's survey of the past year in science is recommended both for some interesting articles and for a view of what science journalists think has been most interesting in science. [JRC]

The Vista
School
District,
just north of
San Diego,
was
captured by
fundamentalists

Creationist Bigotry?

Frank Steiger Lake Forest, CA

Evangelical creationists such as John Peloza claim to urge "critical thinking." However, they really want unthinking acceptance of their ideology. Some examples:

- Evangelical creationists claim that there are only two possible explanations of origins: atheistic creation by mere chance or creation in strict and literal accordance with the description in the Book of Genesis. They refuse to acknowledge the possibility that God created living things through a process of evolution.
- 2. They have no reasonable explanation for the cause of the Genesis Flood and the supernatural migration of animals to and from the Ark. Yet they require that this preposterous dogma *must* be accepted and taught as scientific fact.
- 3. Although all the anti-evolution arguments like moon dust, Earth's magnetic field, Second Law of Thermodynamics, etc., etc., have been repeatedly and conclusively refuted, creationists refuse to respond objectively. Is this critical thinking?
- 4. They work to eliminate the separation of church and state without considering the consequences. What if the new official church were not theirs? Militant evangelical creationists cannot even get along with the World-Wide Church of God, which has an almost identical ideology, let alone with Catholic, mainline Protestant, Jewish, or other faiths.
- 5. They claim that teaching evolution leads to a loss of morals and ethics, yet they provide no factual evidence. Believing that someone is immoral just because his religious or philosophical views are different is nothing more than bigotry!
- 6. They believe that their ideology promotes morality and ethical values. But televangelists such as Jimmy Swaggart, Jim Bakker, Robert Tilton, and others, as exposed on ABC's PrimeTime Live don't bear out that contention!

The Religious Right has become a rich and powerful political force. At 17 Hughes, Alton, CA, near where I live, the Christian Research Institute has a 24,000

square foot building, which they own. This facility has a full-time staff of 48 to monitor TV and radio programs for "secular humanism," store and ship large quantities of books and tracts, carry out public relations and lobbying, and count the money that pours in from the faithful. It has a state-of-the-art broadcasting facility from which Hank Hanegraff, the "Bible Answer Man," transmits via satellite to radio stations all over the US. This organization is only a small part of a massive, tax-exempt, evangelical political movement in the US.

Moab Woman

Some creationists claim a human skeleton from Utah to be the remains of a "giant woman" (from the Biblical days "When giants walked the Earth"). Texas creationist Carl Baugh, Bible-Science Association reports, and C.L. Burdick (Burdick 1973-1974: Discovery of Human Skeletons in Cretaceous Formation; *Creation Research Society Quarterly* 10: 109-110) have touted the mystery of ancient "Moab Woman"—did she live side by side with dinosaurs?

Her left humerus bone was submitted to the UCLA Radiocarbon Laboratory for dating. The resulting report is reprinted here from *Radiocarbon* 31(1): 62, 1989:

UCLA-1942. Moab Woman 210 +/- 70 [years] Left humerus, copper-impregnated, 15 meters below overburden near Moab. . . . Submitted by L. Ottinger and J.E. Ericson, Univ. California, Irvine. Comment (JEE): deep burial was thought to indicate substantial age, but direct date disproves this theory.

In other words, the burial dates to approximately 1740, a date more recent than even creationists accept for dinosaur fossils and antediluvian giants. (Radiocarbon dates are reported as a number of years "before the present," with a give-or-take calculation of possible statistical error; to confuse the matter for recent dates such as this, "the present" is considered to be 1950—the approximate date of the first radiocarbon dating. This allows all dates to be compared with each other rather than with a "present" which changes from year to year, and it avoids the religious connotations of A.D. or B.C. and has no effect on most dates which are in the multiple hundreds of years or thousands of years; 1740 is almost too recent a date for the technique to be useful, and the result would be read by any archaeologist as meaning "modern.")

What if the new official church were not theirs?

v. 12, no. 4, 1992

Newspaper Science Sections Disappearing

Science journalism has been a 10-year growth and decline industry. Casualties of the lingering recession are the newspaper science sections which flourished in the 80's.

More than half have been killed in the past 4 years, according to the Scientists' Institute for Public Information *SIPI Scope* 20(1), Fall 1992.

47 science sections are being published now, and almost half of them are reduced in size, often to two pages inside some other section like "Living" or health. Furthermore, many science sections have mutated into "health and fitness" or other domesticized, "household tips" versions of what they once were. Digests of current journal articles and explanations of new research have largely given way to narrowly focused articles on how technology may impact upon middle class lifestyles.

The *New York Times* Science Section, a Tuesday staple, seems to account for one of the best regular sales for that paper, and it has strong advertising support (largely computer sales). Most science sections have low advertising sales, however, and this accountants' rather than editors' policy has been the death knell for many excursions into science journalism.

Recent newspapers to drop science sections include the Los Angeles Times, Chicago Tribune, Miami Herald, Cincinnati Post, Atlanta Journal and Constitution, San Francisco Examiner, Phoenix Gazette, Kansas City Star, Seattle Times, Houston Chronicle, and Westchester/Rockland Newspapers. The Oakland Tribune has just dropped its twiceweekly science and medicine column.

Some of these papers continue to employ excellent science writers, but there is some debate about how much science coverage is possible outside a possible "science ghetto." Many writers think that the result has to be a return to public coverage limited to "gee whiz" new-breakthrough-type stories rather than routine reporting on day to day science matters unable to create big headlines. [JRC]

Mosaic Magazine Bites the Dust

Volume 23, No. 3, Fall 1992 is the last issue of *Mosaic*, the magazine published by the National Science Foundation. Federal funding cuts forced its elimination. Already cut from bimonthly to quarterly, the last volume was halted after only three issues. Warren Kornberg was editor, and has been with NSF since 1970 (although not always as editor).

Unique among science publications, it attempted to convey to the general public—and especially science writers—the nature and flavor of science under way, not just the gee-whiz summary of results. At its height, circulation only reached 37,000, but it set standards for science and technology journalism, worldwide, and will be sorely missed. The final issue's cover story was "On Equal Treatment of Women in Science" in an 8 page article by Betty Vetter (pp. 34-42).

Florida Follow-up

After taking control of Florida's Lake County School Board in September (*Reports* 12(3)), Religious Right activists swept December 1992 GOP county executive elections, reports the *Lake Sentinel* (12/12/92). Carolyn Thompson became Executive Committee Chair, David Leuschner was elected Vice-Chair, Linda Sellars became Treasurer, and Judith Cauthen became Secretary.

Moderate Republicans threatened to form a new party or social club—or to get out of politics. The conservatives attributed their victory to their strict emphasis on "family values" dealing with school and other issues.

"There is a simple grandeur in the view of life with its powers of growth, assimilation and reproduction, being originally breathed into matter under one or a few forms, and that whilst this planet has gone circling on according to fixed laws, and land and water, in a cycle of change, have gone on replacing each other, that from simple an origin, through the process of gradual selection of infinitesimal changes, endless forms most beautiful and most wonderful have been evolved."

Charles Darwin, 1842 Conclusion to "Sketch" of Natural Selection, later expanded and revised

... death knell for many excursions into science journalism

NCSE And PfAW Cooperate On New 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), antievolutionist Religious Right organizations such as Lou Sheldon's Traditional Values Coalition, and Robert Simonds' Citizens for Excellence in Education, were expected to have a strong showing at the public hearings, but they did not attend. The dates of the August hearings corresponded closely with the Republican national convention in Houston, at which members of the religious right were 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.

Vatican Recants; Galileo Cleared

After 13 years' study, on October 31St a Vatican panel reported that Galileo had been wrongfully condemned by the Inquisition in 1633. He had written in 1632 about Copernicus's discovery that the Earth rotated about the Sun rather than vice versa. This had already been declared heresy in 1616 because a literal interpretation of scripture required that "God fixed the Earth upon its foundation, not to be moved forever."

Surprisingly, however, the Vatican "pardon" noted that both sides in the dispute had had merit and that Galileo's scientific evidence had been inconclusive. The Church, therefore, was not exactly wrong in hewing to the traditional account in *Genesis* as a good alternative, at the time. The implication of this 1992 decision is that Scripture is quite properly in competition with science.

Pope Urban VIII, a long-time friend of Galileo, allowed the scholar to serve his life sentence under house arrest where he could continue his work. At his trial, Galileo defended himself with the argument that Christian faith and scientific research were not mutually exclusive and that studying the natural world could help one understand Scripture and God's creation. He officially recanted on 30 April 1633, but he is said to have muttered that the Earth *does* move as he rose from kneeling before the Inquisition.

In 1757, Galileo's book, *Dialogue Concerning the Two Chief World Systems*, was removed from the banned-book list by the Catholic Church.

Today there are still geocentrist creationists—in the US they sponsor the Tychonian Society, for example. Other "scientific" creationists reject geocentrism, but they also reject Galileo's argument that science need not bow to Scripture. (Flat Earther's, of course, are even more doctrinaire in their Biblical science. . . .)

The Roman Catholic Church has moved to right an old wrong, but it has been done in a surprisingly tentative, unapologetic fashion. [JRC]

COMPUTER BULLETIN BOARD. Back issues of NCSE Reports and other material are available via a computer "Bulletin Board"—as a subdivision of FREENET, a Cleveland, OH system hosted by Case-Western Reserve University. It can be reached via local phone calls connecting to many international computer networks such as BITNET, FIDO-NET, USE-NET, etc., or directly at (216) 368-3888.

the Earth does move

NCSE News

NCSE's Ayala Elected AAAS Pres

Francisco Ayala has been elected president of the American Association for the Advancement of Science. President-elect Ayala, an NCSE Supporter, is Distinguished Professor of biological sciences at the University of California-Irvine. Active in promoting evolution education, Ayala has served on the governing council of the National Academy of Sciences and advisory councils of the National Science Foundation, Environmental Protection Agency, and the National Institutes of Health.

During his term as AAAS president, Ayala says he will focus his energies on federal support for investigator-initiated research, K-12 science education and public science literacy, environmental protection, and protection of biological diversity. In the AAAS magazine Science (18 December 1992, p. 1963), he said that as "the world's greatest economic power and dominant political force . . . the US should exercise leadership toward enhancing international cooperation in scientific research and technological development." He wants the AAAS to take the lead, since it is "the most representative science and engineering organization the US and the world."

Missouri Distinguished Alumnus Award to Genie Scott

NCSE Executive Director Eugenie C. Scott has been chosen to receive the University of Missouri 1993 "Arts and Science Distinguished Alumnus Award."

College Dean Larry D. Clark wrote Scott, "You have distinguished our college with your accomplishments, and your presence at the ceremony will serve as a challenge and a goal to our current students."

The award was voted by the alumni association "with the enthusiastic concurrence of the Dean of the College of Arts and Science." Presentation of the award was scheduled for a February 19, 1993 banquet in Columbia as the culminating event of "Arts and Science Week."

Dr. Scott's service and accomplishments as a teacher, scholar, champion of church/state separation, religious freedom and NCSE leader were among the reasons for her selection for the prize.

Congratulations!

NCSE Supporter Rall, Others Report on Health Effects of Mustard Gas and Lewisite

The national Institute of Medicine (IOM) report, Veterans at Risk: The Health Effects of Mustard Gas and Lewisite, was released January 6th in Washington, DC. Committee chair and NCSE Supporter David P. Rall and other researchers reported on the health effects on more than 60,000 US servicemen used as human guinea pigs during World War II in order to develop protective agents to thwart the effects of poisonous gasses used widely in WWI. Rall was interviewed at length on All Things Considered and called upon the Defense Department to release veterans from secrecy oaths in order to allow treatment and analysis of biological effects.

I.IRC1

Creationists Attack NCSE Supporter Sagan

After many months, creationist Ken Ham may be tired of attacking the late Isaac Asimov. In the December Acts and Facts, instead of "Asimov Still Dead!" a successor-demon has been targeted: Carl Sagan! Ham writes a diatribe against Sagan, taking his cue, oddly, from a Parade Magazine poll which identified Sagan as the "Smartest Man in America."

Ham turns a flattering public relations note into evidence for a sinister plot by evolutionists to destroy humanity—a task once shouldered by Asimov. He turns the encouraging fact that a self-admitted scientist and intellectual is widely admired into a general threat to the planet's (Christian) soul. Sagan, you see, is an evolutionist, and he believes the Universe is "billions and billions of years" old, says Ham, quoting *Cosmos* (where no such actual quote exists!). Such demonizing of evolution seems funny and desperate—until one realizes the effectiveness and danger of Big Lie anti-intellectualism and that Ham is serious.

So—Congratulations, Carl, on the fulmination level of your enemies. Ken Ham's vitriol is a sort of honor, although it also has its frightening aspects and pathetic aspects, as well.

[JRC]

Parade

calls Sagan

"smartest

man in

America"

and ICR

counter-

attacks

NCSE News

New Journal on Evolution Edited by NCSE Member

Molecular Phylogenetics and Evolution is a new technical international journal edited by NCSE member Morris Goodman, an anthropologist and Professor in the Department of Anatomy and Cell Biology, Wayne State University School of Medicine, Detroit. The journal's general mission is to advance the understanding of evolution and molecular biology. Its writers address a technical, professional audience. The second issue includes an article on primate evolution of interest to specialists, "Reexamination of the African Hominoid Trichotomy with Additional Sequences from the Primate B-Globin Gene cluster," by Wendy Bailey, et al. It places Gibbons in one group and humans, chimps and gorillas in another, all closely related via DNA analyses. Chimps and humans are tentatively placed in one "subtribe," gorillas in another.

MPE, a quarterly, costs US \$148 per year in the US and Canada, \$179/yr elsewhere, from Academic Press, Journal Promotion Dept., 1250 Sixth Avenue, San Diego, CA 92101-9923.

Honig continued from p. 1

tives, intent, or the putative fact that he did not profit from the situation in question. The possibility that he might have profited was ruled to be the only matter in question. Testimony was not allowed which would have demonstrated that QEP brought large amounts of grant money to the California schools in question. "Results" and intentions were ruled inadmissable.

This eliminated the gist of Honig's legal defense, although his attorneys managed to interject such issues occasionally. A long-time Peat-Marwick accounting executive testified that he had found no evidence of diversion of public funds, for example, and that hundreds of thousands of dollars had been broght in via grants.

Jurors were divided initially, but in newspaper interviews it seemed that they had voted "guilty" because of the technical requirements set by the judge. One juror left crying and said she couldn't understand how the Attorney General "could sleep at night" after bringing these technical charges.

Criminal charges were filed about a year ago charging Honig with conflict of interest over the Quality Education Project, a nonprofit effort to improve education by involving parents in school decisions. Honig's wife Nancy was executive director. QEP has received high praise from virtually everyone involved in California public education and from Bush/Reagan administration education policy advisors. Dr. Diane Ravitch, for example, testified at the trial on Honig's behalf, and prosecution witnesses volunteered that they knew that Honig's activities were not self-aggrandizing.

"Conflict of interest" cases in California are almost always handled as administrative or civil court issues. Local observers were startled by the decision to charge Honig with felonies. However, his opponents viewed the charges as a way of eliminating one of their most effective adversaries from the political process—which they had been unable to do via the ballot box.

Education reformers were aghast at the jury verdict, rendered after only three hours' deliberation. Conservatives and "religious right" critics of Honig policies, on the other hand, rejoiced at having apparently ended his career as a popularly-elected reformer in his second 6-year term as state Superintendent of Public Instruction. California higher education as well as public schools lose a nationally recognized advocate who has fought long and bitterly and usually successfully with conservative-dominated state officers since his election in 1982.

Honig has championed better financial support for all levels of education and made his mark especially in the area of quality standards. Some critics have charged he set standards too high, to the detriment of students who could not master more sophisticated curricula and textbooks, but complaining about his campaign against mediocrity was not always a compelling case for his critics. His steadfast opposition to "scientific" creationism and a clumsy feud with the Institute for Creation Research built up tremendous opposition among conservative critics and contributed to the drive to oust him (See Reports 12(1)).

Assuming Honig is removed from office, Republican Governor Pete Wilson will appoint a successor to serve out the remaining year of his term—but that person will

Honig, continued on p. 15

Joe Stein, State School **Board** President, says "he doubts evolution is fact."

v. 12, no. 4, 1992

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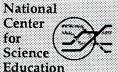
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Tracking Those

Colin Patterson, Cladistics, and Creationists

Eugenie C. Scott

olin Patterson is an evolutionary biologist at the British Museum of Natural History. Over a decade ago, he became entangled with American creation "science" when he gave a visiting lecture to the systematics discussion group at the American Museum of Natural History. Cladistic taxonomy was all the rage at the AMNH, and the variant, "transformed" cladistics was evolving, with Patterson as a key player. Patterson made some statements that taken out of the context of cladistic taxonomy, might sound anti-evolutionary. The Institute for Creation Research published a tract, "Evolution? Prominent Scientists Reconsiders" in 1982, claiming that at the AMNH speech, Patterson "confessed" that he no longer "believed" in evolution. This claim has been widely circulated due to a clandestine tape transcript of the session.

In Patterson's own words, from a 1982 letter to teacher Steven Binkley,

I was asked to talk on "evolutionism and creationism," and knowing the meetings of the group as informal sessions where ideas could be kicked around among specialists, I put a case for difficulties and problems with evolution, specifically in the field of systematics.

Note: he was talking to *specialists* about *systematics*. Cladistics is an approach to systematics and taxonomy that has become quite popular in evolutionary biology because it allows for more testable and hopefully accurate phylogenies. Cladistics descends from Willi Hennig's *Phylogenetic Systematics*. As Hennig's title implies, cladistics is fundamentally a way of looking at evolution. This point is important because anti-evolutionists (such as Phillip Johnson and Tom Bethell) have tried to portray cladistics as an anti-evolutionary endeavor. This could not be farther off the mark.

In a cladistic analysis, the investigator is concerned, among other things, in the formation of "sister groups," pairs of taxa that share a common ancestor with each other more recently than with any other taxon. In identifying sister groups, Hennig suggested differentiating between traits that were inherited from a common ancestor ("primitive traits") and traits acquired since the split from a common ancestor ("derived" traits). Determining shared, derived

traits is an essential method of studying the patterns of evolutionary history.

Transformed cladistics is a variant of cladistics, and not all cladists subscribe to it. Patterson is a "transformed" cladist. Ordinary cladistics assumes that evolution has occurred. Transformed cladistics tries to minimize ad hoc assumptions about the patterns and processes of evolution, including the fact of evolution itself. This is not the same thing as saying that evolution did not occur. It is merely a difference between the approaches of two schools of reconstructing relationships.

"Transformed cladistics" is not without its critics. John Maynard-Smith summarizes the position—and essential problem—of "transformed" cladistics so well, he should be quoted in full:

(Cladists) have discovered that Hennig's procedures for constructing "cladograms" (trees representing relationships) can be carried out quite satisfactorily without thinking about evolution. From this, they conclude that maybe evolution is not a necessary hypothesis in biology, and that evolutionary arguments are "mere rhetoric."

Now it is obviously true that one can apply Hennig's methods without thinking about evolution. It is also true that one can drive a motor car without understanding how internal combustion engines work. However, if internal combustion engines didn't work, one would not be able to drive cars, and if evolution hadn't happened one would not be able to apply Hennig's methods successfully. It is not merely that the concepts of sister group, and of primitive and derived traits, make little sense in the absence of an evolutionary hypothesis. The crucial point is that Patterson's first "axiom" of cladistics—that "features shared by organisms manifest a hierarchical pattern in nature"—is true only because organisms evolved (Maynard-Smith, 1982:108-109).

Patterson continues in the letter to Binkley:

I was too naive and foolish to guess what might happen: the talk was taped by a creationist who passed the tape to Luther Sunderland....

Patterson's first "axiom" of cladistics that "features shared by organisms manifest a hierarchical pattern in nature"—is true only because organisms evolved

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Incredible Creationists

Since, in my view, the tape was obtained unethically, I asked Sunderland to stop circulating the transcript, but of course to no effect. There is not much point in my going through the article point by point. I was putting a case for discussion, as I thought off the record, and was speaking only about systematics, a specialized field. (italics not in original) I do not support the creationist movement in any way, and in particular I am opposed to their efforts to modify school curricula. In short, the article does not fairly represent my views. But even if it did, so what? The issue should be resolved by rational discussion, and not by quoting "authorities," which seems to be the creationists' principal mode of argument.

So Patterson was tossing around ideas to a group of students and specialists about a specialized subfield, transformed cladistics. The specialized nature of the discussion and the particular philosophical context of the statements were ripe for taking words out of context. Patterson has not "reconsidered" whether evolution has taken place, he is arguing about how to work out relationships between organisms.

Patterson himself, responding to a creationist misquotation, said: Chelvam asserts that "we are drowning" in evidence against darwinism. He cites nothing beyond the remarks attributed to me. It seems possible that he confuses two theories under the name of darwinism, the general theory of common ancestry or descent with modification, and Darwin's special theory of mechanism, natural selection. If he knows of evidence inconsistent with the general theory of common descent, he should tell us what it is. I know of none. (1988)

The "Patterson story" illustrates two common creationist enthusiasms: taking statements out of context, and refusing to recognize corrections when made. Patterson's letter to Binkley and other commentary from him have been accessible since 1984 and 1985 (Creation/Evolution Newsletter, 4(6):4-5; 5(5):4-5).

References:

Maynard-Smith, John. 1982. The pattern of Nature. in Maynard-Smith, ed: *Evolution Now: A Century After Darwin*. San Francisco: W.H. Freeman and Co. Letter from Colin Patterson to Steven W. Binkley, June 17, 1982

Patterson, C. 1988. Letter to the editor. Nature 332:580.

Eugenie C. Scott, a physical anthropologist, is Executive Director of the National Center for Science Education.

I do not support the creationist movement in any way, and in particular I am opposed to their efforts to modify school curricula.

Honig continued from p. 11

have to be approved by the Democratic state legislature. Democrats initially were demanding that another Democrat be nominated. Appointment of an outright "scientific" creationist candidate is unlikely, but a much more conservative successor is predicted, and any successor will be chastened by the example of the violent, take-no-hostages opposition to Honig.

Opponents on the state Board of Education want to roll back Honig's policies on "teaching evolution as if it were science," sex education, making textbooks more rigorous, and involving academics and parents in school policies. The Board is now dominated by Honig opponents—and opponents to his policies, more to the point.

Some Honig allies were critical of his apparent political naivete. They considered his efforts well-intentioned but open to the charges brought against him. Since he was obviously a lightning rod for potential complaints, any involvement with a private effort such as QEP was

potentially incendiary—his wife did draw a salary from QEP, for example.

Honig was charged with using his office to promote his wife's organization, thus benefitting financially from the non-profit's success. Specifically, he was accused of contracting out four public employees to QEP, at a cost of \$337,509 (San Francisco Chronicle 1/1/93). Honig's office says the four employees were on unpaid leave.

QEP funds came from federal and private grants, including over \$1.9 million from the US Department of Education. In December 1992, the USDE announced it would not seek the return of the funds it granted QEP. The California State Board of Education investigated the charges of conflict of interest and declined to bring charges, as did the Fair Political Practices Commission. However, Board President Joe Stein persuaded the

Honig, continued on p. 23

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"

Albert, Michael. 1992. Not All Stories Are Just Stories. Z Papers 1(4): 39-51. A detailed response to numerous critics of science and rationalism as being racist, colonialist, sexist, etc.

Albert, Victor A., S.E. Williams and M.W. Chase. 1992. Carnivorous Plants: Phylogeny and Structural Evolution. *Science* 257: 1491-1495, 11 September. Technical paper.

Anonymous. 1992. Give them the Tools.... *Mosaic* 23(3): 12-21, Fall. Science education technology moves beyond gadgets, and computers get serious.

Barlow, C., and P. Volk. 1992. Gaia and Evolutionary Biology. *BioScience* 42(9): 688-692. Review and critique of the Gaia Hypothesis.

Caldwell, M. 1992. How Does a Single Cell Become a Whole Body? *Discover* 13(11): 86-93, November. Latest on animal development.

Chomsky, Noam. 1992. Rationality/Science. Z Papers 1(4): 52-58. A Chomsky defense of science and rationality against attacks by fellow leftists.

Clermont, Norman, and J.F. Thackeray. 1992. On the Piltdown Joker and Accomplice: A French Con-

Oasis Newsletter

Canadians face many of the same anti-evolutionist pressures suffered by their friends south of the border. *OASIS Newsletter*, edited by J. Richard Wakefield, is published by the Ontario Association for the Support of Integrity in Science Education, (OASIS), Box 617, Beaverton, Ontario, Canada LOK 1AO, \$10/yr Canadian, \$15/yr US.

The Summer *ON* 5.1, Number 14, includes 26 pp.; "A Creationist Looks at Living Fossils" [Margaret Helder], "DNA, Chromosomes and Human Evolution" [H. Helmuth], "The Equal Time Argument" [D. Renault], and "Did Darwin Plagiarize Lamarck?" [Michael Ruse], plus news articles, comments on recent "Big Bang" claims, letters, etc. [JRC]

nection? *Current Anthropology* 33(5): 587-589. Two comments on an earlier article by P.V. Tobias; more on the endlessly juicy topic.

Clube, Victor, and Bill Napier. 1991. *The Cosmic Winter*. Oxford: Basil Blackwell. £15.95, cloth. "A challenge to orthodoxy," says reviewer Martin Leech in *Astronomy Now*. Argues that major comet impacts as recent as 4-5000 years ago have continued a pattern of intermittent bombardment far beyond that advocated by Alvarez, Sagan, Raup, and others.

Conroy, G.C. 1992. Closing the Hominid Gap. *Nature* 360: 393-394. Review of Leakey and Lewin's *Origins Reconsidered*.

Cronin, Helena. 1992. The Ant and the Peacock: Altruism and Sexual Selection from Darwin to Today. Cambridge: Cambridge University Press. 490 pp., \$39.50. Author calls "selectionism" the totality of "modern Darwinism." Not everyone agrees, since Darwinism, in the vernacular, is typically used to mean evolution of all sorts, building on Darwin.

Dean, D., and E. Delson. 1992. Second Gorilla or Third Chimp? *Nature* 359: 676-677. Latest thinking on the relationships between gorilla, chimps and humans.

Ehrenreich, Barbara. 1992. Truth, Justice and the Left. *Z Papers* 1(4): 59-64. Rationalism isn't sexist or ethnocentric.

ERIC. 1992. Teaching Mathematics Effectively and Equitably to Females. ERIC Clearinghouse on Education, Box 40, Teachers College, Columbia University, NY, NY 10027. How female students can be encouraged to pursue math beyond intro courses. \$5.00 from ERIC.

Escalante, Jaime. 1990. The Jaime Escalante Math Program. NEA Communications (attn: Charles Ericksen), 1201 16th St, NW, Washington, DC 20036 (202-822-7228). FREE 16 pp. booklet on teaching science and math by the renowned ("Stand and Deliver") math teacher.

Gould, Stephen J. 1992. The Confusion over Evolution. *New York Review of Books* 34(19): 47-55, 19 November. Gould reviews Cronin book (above) and explains his views on both her radical natural selectionism & R. Dawkins'; praises Eldredge's *The Miner's Canary* [See centerfold] and Ward (below).

Resources

Gould, Stephen J. 1992. What is a Species? *Discover* 13(12): 40-44, December. Good review of the concept.

Grabiner, Judith. 1992. The Use and Abuse of Statistics in the "Real World." *The Skeptic* 1(2):14-21, Summer. Good explanation of stats for the nonspecialist—and for teachers and scientists not used to explaining these things when needed. **Available from NCSE for SASE+\$1.60**.

Gray, J., and W. Shear. 1992. Early Life on Land. *American Scientist* 80(5): 444-456. Minute fossils indicate that life invaded land millions of years earlier than previously thought.

Henbest, N. 1992. Gregarious Galaxies. *New Scientist* 135(1840): 26-30. Evolution of galaxies.

Hughes, D. 1992. Where Planets Boldly Grow. *New Scientist* 136(1851): 29-33, 12 December. How many stars have planets, and what are the systems like?

Klutz Editors, H.B. Lewis and Sara Moore. 1992. *Kids Shenanigans: Things to Do That Mom and Dad Will Just Barely Approve of*. Palo Alto: Klutz Press. Spiralbound, incl. Whoopie Cushion kit, \$13.95. About 30 activities for adolescents which illustrate science & technology principles subversively—while sometimes grossing out parental units (example: real bloody finger in a box).

Knight, John. 1985. Creation-Science, Evolution-Science, and Education: Anything Goes? *Australian Journal of Education* 29(2): 115-132. Analysis of creationism in Australia; 7 years ago but still a good resource.

Krause, Richard M. 1992. The Origin of Plagues: Old and New. *Science* 257:1073-1078, 21 August. Origins and evolution debates in epidemiology.

Neu, Harold C. 1992. The Crisis in Antibiotic Resistance. *Science* 257: 1064-1073, 21 August. Review article on bacterial evolution (and the danger it poses).

Nisbet, E.G. 1992. Differing World Views. *Nature* 360: 390-391. Review of Dalrymple's *The Age of the Earth* [See centerfold] and Milton's *The Facts of Life: Shattering the Myths of Darwinism.* Milton is an evolution-basher ala Macbeth, Hitching, Johnson, Rifkin, etc.

Radetsky, P. 1992. How Did Life Start? *Discover* 13(11): 74-82. Did it occur in hydrothermal vents?

Ross, Hugh, and Walter Bradley. 1992. Theories on Life Origin Take New Directions. *Facts and Faith* 6(4): 2-3. Old Earth creationist critique of RNA and thermal vent biogenesis proposals. A burgeoning new anti-evolution group's article.

Ruse, Michael. 1989 (orig. 1987). *Taking Darwin Seriously*. Oxford: Basil Blackwell. 318 pp., pb., \$15.95. Outstanding survey of the evolution of evolution as a philosophical concept.

Shapiro, Arthur M. 1987. God and Science. *The Pennsylvania Gazette*, October, pp. 47-51. A biologist ruminates on creationism, evolution and the meaning of science. **SASE+\$0.50 from NCSE**.

Stearns, Stephen C. 1992. The Evolution of Life Histories. NY: Oxford University Press. xii+249

FREE RESOURCES—NEW SOURCE

BSCS Now Distributes "Science as a Way of Knowing"

Science as a Way of Knowing is a series of seven volumes designed to be background information for introductory biology teachers. NCSE has touted them before when they were distributed by the American Society of Zoologists.

Now they are being distributed by the Biological Sciences Curriculum Study (BSCS) free of charge thanks to a grant form the Carnegie Corporation. Titles are:

- I. Evolutionary Biology (1983)
- II. Human Ecology (1984)
- III. Genetics (1985)
- IV. Developmental Biology (1986)
- V. Form and Function (1987)
- VI. Cell and Molecular Biology (1988)
- VII. Neurobiology and Behavior (1989, 1990, two parts)

A \$3.00 shipping fee is requested for both volumes IV and VII, however (i.e., \$3.00@). Order from (and make checks payable to, for IV and VII—no purchase orders accepted): BSCS, 830 North Tejon Street, Suite 405, Colorado Springs, CO 80903.

Resources

pp., Pb. \$29.95. Technical book evaluates the making of the "grand synthesis" in evolutionary biology and the reaction against "adaptationism" as the sole theme for evolution.

Stevenson, Harold W. 1992. Learning from Asian Schools. *Scientific American* 267(6): 70-77. Effective "foreign" classroom techniques, many developed in the US but little-used here.

Stevenson, Harold W., Chuansheng Chen and Shin-Ying Lee. 1993. Mathematics Achievement of Chinese, Japanese and American Children: Ten Years Later. *Science* 259: 53-58, 1 January. American students and parents are highly satisfied with student performance and school curricula, even though they know how poorly they compare with other countries, raising serious questions about support for school reform. Innate ability rather than hard work is cited by Americans as the key to success, contrary to Asian counterparts' views.

Tattersall, Ian. 1993. Madagascar's Lemurs. *Scientific American* 268(1): 110-117, January. To understand human ancestors, study lemur evolution; many species are already extinct, and habitat destruction is pressing survivors to the brink. Many illustrations, incl. reconstructed fossil forms drawn with advice of NCSE's L. Godfrey.

Thompson, K.S. 1992. The Challenge of Human Origins. *American Scientist* 80(6): 519-522. Mitochondrial Eve replacement hypothesis vs. the multiregional hypothesis.

Tunnicliffe, V. 1992. Hydrothermal-Vent Communities of the Deep Sea. *American Scientist* 80(4): 336-349.

Ward, Peter Douglas. 1992. On Methuselah's Trail: Living Fossils and the Great Extinctions. San Francisco: W.H. Freeman. 212 pp., \$18.95. Praised by Gould as a good study of mass extinctions.

Wells, William G., Jr. 1992. Working with Congress. A Practical Guide for Scientists and Engineers. Washington: AAAS, 1333 "H" St, NW, Washington, DC 20005. \$12.95. From testifying, writing letters, to just understanding the way govt works.

York, Derek. 1993. The Earliest History of the Earth. *Scientific American* 268(1): 90-96, January. Prying into the first billion and a half years of Earth's existence.

Darwin. Interactive HyperCard Stack Program published by Chariot Software for Apple Macintosh computers (not IBMs or clones). \$29.95. from computer dealers or (619) 298-0202.

Reviewed by Frank L. Fire, Jr. Akron, OH

I'm a firefighter/paramedic with a few years of formal education in biology. I have been interested in the creation-evolution controversy for several years and have built up an extensive library on the subject—including the Macintosh computer program mentioned in NCSE Reports 12(2), Darwin.

The program is extremely interesting, informative and easy to use. It covers not only Darwin's ideas but also gives background on 19th century England, an overview of geology and biology, some historical conflicts caused by Darwin's ideas, an outline of current creationist thought, and even a board game between Thomas Huxley and Bishop Wilberforce! (Huxley doesn't always win!)

Included also are an informative bibliography, a chronology, a glossary, and a set of note cards for the user. Information is presented in a format that makes it very easy to leave the page you are reading on screen and get further information on any subject and then return to your place instantly.

Chariot software also has a program called *Evolution*, which I look forward to receiving shortly and would be happy to report on in the future.

Note: This is *not* the CD-ROM program, *Darwin*, reviewed in *Reports* 12(3)—a more expensive and ambitious program with different uses.

Jehovah's Witnesses President Dies

Frederick W. Franz died on December 22nd at his office in Brooklyn. He was 99 years old and had been president of the Watch Tower and Bible Tract Society since 1977. His organization's door-to-door "witnessing" is probably the world's most frequent contact with creationist publication and "testimony," but the organization has been basically just anti-evolutionist, not very active in classroom equal-time debates.

"Scientific" Creationism on Another Planet

"Nightfall," published in 1941 by Isaac Asimov, was voted best science fiction story of all time by the Science Fiction Writers of America a few years ago. Compare the following short excerpt with statements from today's creationists. (Set on a distant planet with multiple suns, the tale is about a doomsday cult with a sacred 'Book of Revelations' which aims to sabotage research which might scientifically explain the archaeological evidence of cyclical rises of civilization followed by sudden collapses. The keepers of the secret myths worry they will lose power if science is allowed to provide materialistic explanations of the mystery. In the process they reveal the problem of confusing science and theology.)

[Aton, the astronomer, said] "I have fulfilled my end of the bargain. . . . I promised to prove the essential truth of the creed of the Cult."

"There was no need to prove that," came the proud retort. "It stands proven by the 'Book of Revelations.'

"For the handful that constitute the Cult, yes. Don't pretend to mistake my meaning. I offered to present scientific backing for your beliefs. And I did!"

The Cultist's eyes narrowed bitterly. "Yes, you did, with a fox's subtlety, for your pretended explanation backed our beliefs, and at the same time removed all necessity for them. You made of the Darkness and of the Stars a natural phenomenon, and removed all its real significance. That was blasphemy."

"If so, the fault isn't mine. The facts exist. What can I do but state them?"

"Your 'facts' are a fraud and delusion."
Aton stamped angrily, "How do you know?"
And the answer came with the certainty of absolute faith. "I know!"

Meanwhile, back in this galaxy:

The Lexington Herald-Leader (Ky.) of 10 October 1992 quotes Walter Lang, B-SA founder and currently director of the Genesis Institute in Richfield, MN: "They [most Christians, especially scientists and environmentalists] put nature ahead of the teachings of Scripture, even though they may call themselves evangelical Christians. It's essentially a worship of nature rather than a worship of its Creator." When the Bible and science conflict, science is wrong, Lang said. To be accurate, science must bow absolutely to the correction of Scripture. [JRC]

Is the "Big Bang" Anticommunist?

Creationists have exploded for months about new claims by astrophysicists to have verified the "Big Bang" theory of cosmogenesis. They have objected that this usurps God's role and is blasphemous, and they argue that we did not actually observe it first-hand, so it can't be science.

This latter argument is often called "Baconian" because Francis Bacon proposed that, among other things, science should be limited to what could be directly, physically observed. Science has long outgrown this view, but it still is a favorite among creationists.

Less well known is that some Marxists make a similar argument. In "Big Bang 'Creationism'" Lester Talkington argued that the "Big Bang" lacks physical probability, is unobservable, violates scientific laws, and contributes to the "mystification" of science. It encourages mystical or religious thinking rather than materialism (Science and Nature 6: 3-5, 1983). Further debate in that journal ensued (1986, (7/8): 91-100). In a long response to his critics, Talkington (p.98) wrote, "The Marxist approach to cosmology would be, it seems to me, to start by acknowledging that we do not now and may never have any basis for precise (absolute) knowledge of any beginning whatever. [As Lenin writes in "Materialism and Emperio-Criticism," (1908)], 'nature is infinite . . . it infinitely exists.' A materialist cosmology would not give so much credence to a vast theoretical structure erected on the sands of changing interpretations. . . . "

"Most of the content of this discussion...," Talkington adds, "is based on my 30-year collection of notes, reprints and clippings on anything anomalous in the scientific literature or popular press" (p.99).

For years "scientific" creationists have attacked evolutionists, Big Bang advocates, and the like of either being communists or teaching a view which leads to "evil fruits" such as communism. Furthermore, they typically have used the tactic of marshalling anomalous quotes and clippings to prove their case. My obscure research, reported here, seems to argue just the opposite—that the evil roots of humanistic science lead to creationism! Does this imply that "scientific" creationism is the last thriving outpost of communism? [attn: Thin-skinned ICR members—This is just sarcasm!]

To be accurate, science must bow absolutely to the correction of Scripture.

v. 12, no. 4, 1992

Texas Symposium on Darwin: Challenge from Foundation for Thought and Ethics—and Phillip Johnson

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In March 1992 I took part in a Dallas symposium, "Darwinism, Scientific Inference or Philosophical Preference?" The conference, set in a debate format, was a singular experience for me. Most scientists, although they may do a great deal of public speaking on their specialties, rarely are called upon to defend their views in front of an audience which potentially shares few of their basic premises. When fate thrust this charge upon me, I was forced to reassess the nature of my adherence to the theory of evolution.

My invitation, from Jon Buell, Director of the Foundation for Thought and Ethics, resulted from my earlier conversation with Thomas Woodward, a philosophy professor at Trinity College, Florida. Woodward had contacted me concerning some harsh words I had spoken regarding his talk at Texas Tech. To my surprise, he turned out to be an affable and educated individual, and while we didn't agree on everything, I didn't wind up ripping the phone out of the wall. The result of this self-restraint was an invitation, received with trepidation, to take part in the FTE symposium.

FTE is a rather conservative-oriented Christian think-tank in Dallas. It struck me as a mom-and-pop operation; Jon Buell, his wife, and daughter were indefatigable, loquacious and ubiquitous at the meeting. The symposium was at Southern Methodist University, much to the consternation of the biology faculty who, I think, found the idea of debating Darwinism on campus about as welcome as Ralph Nader at a General Motors board meeting.

The symposium began with a rousing talk by UC-Berkeley law professor Phillip Johnson, author of *Darwinism on Trial*. He has no formal training in biology, and all his academic credentials are in the legal realm. He is an energetic and polished speaker and obviously quite bright. I'm not sure what his motivation is. Why anyone in middle age would want to embark upon a completely unrelated, highly technical academic discipline after having established a credible record as a scholar in one area is difficult for me to understand. Moreover, Johnson's campaign to rid science of the error of evolution has

forced him to endure the unmitigated sarcasm of his university colleagues.

But this opprobrium seems to fall off Johnson like water off a duck's back, and he appears to be having the time of his life being the *bete noir* of evolutionary gatherings. At the conference, he suggested that his role as gadfly was reward enough. While he may have additional motivations, I'm sure that it is much more entertaining to be embroiled in controversy than to be writing stuffy articles for law journals.

Can I summarize what Johnson believes? Not without difficulty, because his views are complex and not always internally consistent. However, I believe he speaks for a broad group of conservative Christian academics, and it behooves biologists to take note rather than to dismiss them out of hand. They certainly don't belong to the "flat-earthers" at the Institute for Creation Research who seem to think the fossil record was insinuated into rocks by a nasty little demon in order to tempt the ungodly. In fact, Johnson didn't seem to have much patience with the Gish and Morris crowd in San Diego.

Johnson appears willing to accept the basic picture of the universe portrayed by modern science—until he comes to biology. The core of his argument is that the Earth is very old, that fossils exist, that microevolution does occur—but natural selection lacks the creative force necessary to produce the wealth of diversity among living creatures. Thus Johnson argues for a universe ruled by an intelligent, guiding presence who intervenes on a day-to-day level and can produce species when and if He feels like it. He also argues that such a belief can be established on the basis of rational argument rather than by faith alone. He does not offer an alternative to evolution aside from fuzzy ideas about divine force guiding the assembly of living systems.

Johnson has been criticized for lacking a solid understanding of biological facts, and a lot of his iconoclastic efforts seem aimed at issues long ago resolved, such as gaps in the fossil record and whether microevolution is the equivalent to macroevolution but on a smaller scale. Stephen Jay Gould argues in a *Scientific American* (July

Johnson appears willing to accept the basic picture of the universe portrayed by modern science—until he comes to biology.

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1992) book review that Johnson's book is basically a badly done rehash of outdated arguments. Johnson responds to critics by accusing them of nitpicking and unwillingness to deal with the inherent contradictions of Darwinism.

At the FTE symposium all of the papers dealt with technical issues in evolution, and none demanded adherence to any particular religious persuasion. One of the most interesting was by Leslie Johnson (no relation) of Princeton University who discussed the evolution of terrestrial iguanas on the Galapagos Islands. There are several species which diverged from an aquatic ancestor that swam from the mainland about 15 mya. But the present Galapagos have only existed for about 3 million years. These data argue for a much older range of now-submerged islands in the same chain—which have recently been confirmed by researchers. Thus the theory of evolution does exactly what a good scientific theory should do: it makes predictions subject to testing and, in this case, confirmation.

It was gratifying to see the Friday night debate between Johnson and Michael Ruse, the history and philosophy of science professor (and NCSE Supporter) from Canada's University of Guelph. There was a crowd of 500 or more, and from the Q&A session I would judge that it generated a lot of student excitement. The question period went on long after the formal presentation and at times became quite heated. Ruse did a fine job, but I thought he did not address what I thought were the two major issues: whether Johnson had his science right, and whether a thoughtful person can believe simultaneously in the theory of evolution and Christianity. The latter, especially, seems to be a major factor in Johnson's public appeal.

My positive feelings about the symposium outweighed my apprehensions. The operation was well-managed, the hosts unfailingly courteous, the discussion carried out on an intellectual plane. Participants appeared to be genuinely committed to establishing their views on the basis of logical discourse. I believe the people at the mysterious Foundation are sincere and honestly trying to develop a dialogue.

The bottom line is, of course, the whole issue of the theory of evolution. Are mechanistic explanations adequate to account for the diversity of life? Did today's species result from random mutation, variation and selection? I'm convinced that they did, but I'm willing to admit that thoughtful people with a strong prejudice toward an ordered universe presided over by an omniscient Creator might honestly have difficult accepting

what seems obvious to me. The FTE is convinced that evolutionary theory is invalid and that in an open forum they will prevail. Most evolutionary biologists hold the opposite view, and many would argue that debating the issue is fruitless and only serves to add stature to intellectually bankrupt issues.

Unfortunately, there are few opportunities for average people to hear these propositions considered outside a college classroom. People who sit on school boards, who decide the content of textbooks, and who elect officials have probably not been exposed to a well-argued presentation of evolution since they themselves were in college (if then). Biologists have to face the actuality that if they want any opportunity to present their views, they will have to do so in a forum which may dignify individuals or philosophies for which they harbor little sympathy.

This is the reality of the challenge we face.

Center of Creation?

The Boston Globe Magazine (6 December 1992, p.12) asked astronomer Carl Sagan about a book which "asserts that science has continually belittled man's place in the Universe, that science has made mankind feel less and less significant."

Sagan replied, "But the question is: Shall we accept a comfortable lie or embrace the uncomfortable truth? . . . And so, yes, if your self-worth comes from being at the center of the Universe, then science will make you uncomfortable. If your self-worth comes from other things, then science won't bother you."

Too few people probably think about science as rationally as this, but Sagan shines a spotlight on a major motive and appeal of "scientific" creationism.

Noah's Arkeology in Oregon

A conference of ark-fans was scheduled for 29-31 January in Portland, Oregon. Speakers included the Institute for Creation Research's long-time ark-tracker John Morris, Walter Lang (a founder of the Bible-Science Association), John Baumgardner, Bill Crouse, and Charles Willis. Registration was \$185 "to rub shoulders with veteran researchers." Anyone interested should call C. Allen Roy at 503-777-8347, not NCSE.

"... if your self-worth comes from being at the center of the Universe, then science will make you uncomfortable. If your self-worth comes from other things, then science won't bother you."

CBS "Documentary" Touts Scientific Creationism

On February 20th, CBS television broadcast a two hour show entitled The Incredible Discovery of Noah's Ark. Narrated by actor Darren McGavin, the production relied almost totally upon "scientific" creationists as interviewees and as technical consultants. The program concluded that the ark has been found, but of more concern, it was a non-stop presentation of young earth creationism as if it were established scientific fact and a more than equal in a debate with out-of-it evolutionary biology, geology and normal science. "Experts" consulted included Henry Morris, John Morris, Tim LaHaye and others associated with the Institute for Creation Research and Walter Brown and Carl Baugh, self-proclaimed "paleontologist" associated with Texas "Mantrack" claims from which even the ICR has distanced itself. Brown described how continental drift happened in a single day, brought on by the Flood (water from inside the Earth, the "vapor canopy," and oceans combined to create a force equal to thousands of hydrogen bombs, you see).

NCSE is very concerned about this blatant pseudoscience and is in touch with CBS and other organizations. We do not advocate censorship but deplore fraudulent claims. Tapes of this program are being sold for \$30, and we wonder if they will show up soon in classrooms and school board and curriculum hearings. Please keep your eyes open for such appearances and let NCSE know. If you saw the broadcast, you may want to contact your local CBS affiliate, the national network, the FCC, and local media to express your concern about this promotion of bad science. More on this next issue. [JRC]

Other People's Ark

The September 1992 Acts and Facts Impact Series, #213, published by the Institute for Creation Research, is written by John D. Morris, who has spent considerable time and we assume money searching for the Ark over the last 22 years. In this Impact statement, he discusses recent claims of the discovery of the resting place of the Ark by two non-ICR "arkaeologists," Ron Wyatt and David Fasold. Suffice to say that even Morris, an Ark enthusiast if there ever was one, finds no grounds in these recent Ark claims, either.

But what is perhaps an unusually revealing statement occurs at the very beginning of the article in a discussion of how eyewitness reports of Ark discoveries have proliferated since the 1940's.

Unfortunately, none of these accounts have been substantiated by documentation. Thus, all are to some degree questionable, and each should be held lightly. It can rightly be said that without these "eyewitness" reports, there would be no reason to look for the Ark, for the Bible contains no prophecy that it would be found. (my italics.)

Apparently, according to Morris, if it isn't in the Bible, it isn't worth exploring. So much for the notion of empirically-based scientific exploration. T.H. Huxley said it best, "The improver of natural knowledge absolutely refuses to acknowledge authority, as such. For him, skepticism is the highest of duties; blind faith, the one unpardonable sin." [Eugenie C. Scott]

End of the World in Sight?

"I have read the Book of Revelation, and yes, I believe the world is going to end—by an act of God, I hope—but every day I think that time is running out."

Former Secretary of Defense Caspar Weinberger, 1982.

"I do not know how many future generations we can count on before the Lord returns."

Former Interior Secretary James Watt at his 1981 Senate confirmation hearings.

Above from Paul Boyer's 1992 book When Time Shall Be No More; Prophesy Belief in Modern American Culture (Cambridge: Harvard University Press), quoted in Science 258: 1506, 27 November 1992.

Also, according to the Mayan calendar, the Universe comes to an end again in 19 years. Bad news if you have an IRA account. But the Universe has done this a possibly infinite number of times, only to start again, so the current generation is not really being picked on or punished.

[JRC]

Mayan astronomers pinpoint the most recent re-start at 5105 B.P.

Science Ed

Evolution and the Nature of Science Institutes

Eight regional "Evolution and the Nature of Science" programs will be offered to experienced teachers in 1993, and a Summer Institute will again be offered at Indiana University in Bloomington. Sponsored by the National Science Foundation, this project was initiated by NCSE sponsorship of the grant proposals in the writing stage. NCSE provided funding to principal investigators Dr. Jean Beard and Dr. Craig Nelson, direct technical aid in the grant-writing stage, and connections with our network of other educators.

Teachers participating in the 2-week programs and two 1-day follow-ups receive stipends and materials as well as direct training by scientists and master teachers. They then return to home communities and act as resource persons for further impact on science education.

Teachers are encouraged to apply in pairs or teams from individual districts so that they may share their training better when they return to their school systems. Applicants should have a minimum of three years' teaching experience, anticipate continuing to teach biology, and to have shown leadership potential.

The 1993 schedule:

- San Jose State University, CA: 5-23 July (with two 2-day follow-ups)
- · Greater Detroit: South Lyon HS, 21 June-2 July
- Greater Cleveland: Cleveland Metroparks Zoo, 21 June-2 July
- North Central Ohio: Fremont H.S., 14-25 June
- Central Ohio: Dublin HS, 21 June-2 July
- Northwest Indiana: Indiana University, South Bend, 14-25 June
- Greater Indianapolis: Indiana U-Purdue U, 19-30 July
- Greater Louisville, KY, site tba: 12-23 July
- West Central Illinois: Jacksonville HS, 21 June-2 July
- Greater San Diego, site tba: 19-30 July

For a list of contact persons and other information, write Dr. Jean Beard, Biology Dept, San Jose State University, San Jose, CA 95192-0100; call (408) 924-4870.

Honig continued from p. 15

State Attorney General to investigate and bring charges, anyway. Like Stein, Attorney General Lungren is a conservative Republican and long a critic of Honig, a Democrat and education reformer prominent nationally for his success since 1982 in improving textbook quality, science and especially evolution education, and introducing new and more rigorous state curricula. Stein, on the other hand, states that "he doubts evolution is fact" (S.F. Chronicle 1/1/93).

"No money ever went from this department to QEP," Honig said (*NY Times* 1/7/93). "No money went from school districts. This is such a ploy of the right wing."

Honig and his defenders maintain that he is being prosecuted by political opponents, led by School Board President Joe Stein and leading creationists and Christian Coalition advocates opposed to his policies. Honig, an elected official, has been one of the national leaders of education reform and has

stirred extreme hostility among conservatives despite his popular elections.

The trial judge ruled on the first day of trial that Honig could not present evidence that QEP did not benefit financially from Honig's help or that QEP brought benefits to schools rather than costing them money. "This is mind-boggling," said his attorney Hugh Levine (*San Francisco Chronicle* 7 Jan). "It was an error of enormous proportion. Without this we have no defense."

Meanwhile, the California School Board has launched a parallel, separate court battle to strip the Superintendent's office of most of its powers to set or administer its budget and hence, education policy. They also ask for the right of preapproval of all memoranda, documents and bulletins sent out by the Superintendent.

More news on this in our next issue . . .

v. 12, no. 4, 1992

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