

Council Report, President Elect, 2006

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In my capacity as President Elect of the Botanical Society of America, I attended two national conferences. In early December 2005, I attended the Council of Scientific Society Presidents (CSSP) meeting in Washington, DC. This meeting brings together the presidents of some 60 different scientific societies and presents a program of specialists from the political, scientific, and education realm, as well as providing opportunities for the participants to get acquainted and network. Although much of the meeting had little direct relevance to the BSA, there were occasional presentations that were particularly informative, provocative, insightful, and/or encouraging. The one that most impressed me was by Professor George Lakoff, a linguist from the University of California, Berkeley, who provided insights for understanding how the radical right had captured the political reins of the country by framing its arguments to appeal to a broad spectrum of the voting public. Particularly insightful was Dr. Lakoff's analysis of how the radical fundamentalists had framed discussion of science and evolution so that the public has grown suspicious of scientists, opening the door to intelligent design theology to enter the science classroom. I also appreciated the chance to meet such individuals as Toby Horn, President of the National Association of Biology Teachers, and Carl Cowen, President of the Mathematics Association of America.

I found this meeting valuable, but I'm not convinced that the BSA is benefiting long term from its association with the CSSP. I recommend that we monitor the health of this Council each year and reassess our commitment to it. I'm not sure what the BSA gains tangibly from membership in the CSSP.

The second meeting that I attended was the Annual Meeting of the American Association for the Advancement of Science (AAAS) in St. Louis, MO in February 2006. Not only was it valuable to have the BSA represented at this meeting, but the AAAS organized an excellent opportunity for local teachers to learn about teaching evolution. Teachers from the Dover, PA school district that successfully blocked the establishment of intelligent design theology in the science classroom were there, and provided valuable advice and perspectives to the local St. Louis area teachers. Teachers also heard from such luminaries as Peter Raven and George Coyne, the Vatican Astronomer who had harsh words for the radical fundamentalist Christians.

The AAAS adopted a resolution on the teaching of Evolution as follows:

AAAS Resolution: Statement on the Teaching of Evolution

Evolution is one of the most robust and widely accepted principles of modern science. It is the foundation for research in a wide array of scientific fields and, accordingly, a core element in science education. The AAAS Board of Directors is deeply concerned, therefore, about legislation and policies recently introduced in a number of states and localities that would undermine the teaching of evolution and deprive students of the education they need to be informed and productive citizens in an increasingly technological, global community. Although their language and strategy differ, all of these proposals, if passed, would weaken science education. The AAAS Board of Directors strongly opposes these attacks on the integrity of science and science education. They threaten not just the teaching of evolution, but students' understanding of the biological, physical, and geological sciences.

Some bills seek to discredit evolution by emphasizing so-called "flaws" in the theory of evolution or "disagreements" within the scientific community. Others insist that teachers have absolute freedom within their classrooms and cannot be disciplined for teaching non-scientific "alternatives" to evolution. A

number of bills require that students be taught to "critically analyze" evolution or to understand "the controversy." But there is no significant controversy within the scientific community about the validity of the theory of evolution. The current controversy surrounding the teaching of evolution is not a scientific one.

Science is a process of seeking natural explanations for natural phenomena. Scientists ask questions about the natural world, formulate hypotheses to answer the questions, and collect evidence or data with which to evaluate the hypotheses. Scientific theories are unified explanations of these phenomena supported by extensive testing and evidence. The theory of evolution, supported by extensive scientific findings ranging from the fossil record to the molecular genetic relationships among species, is a unifying concept of modern science. Of course, our understanding of how evolution works continues to be refined by new discoveries.

Many of the proposed bills and policies aim explicitly or implicitly at encouraging the teaching of "Intelligent Design" in science classes as an alternative to evolution. Although advocates of Intelligent Design usually avoid mentioning a specific creator, the concept is in fact religious, not scientific. In an October 18, 2002 resolution, the AAAS Board underlined the inappropriateness of teaching Intelligent Design in the science classroom because of its "significant conceptual flaws in formulation, a lack of credible scientific evidence, and misrepresentation of scientific facts." Judge John E. Jones III of the Middle District Court of Pennsylvania firmly reached similar conclusions in the Dover Area School District case.

The sponsors of many of these state and local proposals seem to believe that evolution and religion conflict. This is unfortunate. They need not be incompatible. Science and religion ask fundamentally different questions about the world. Many religious leaders have affirmed that they see no conflict between evolution and religion. We and the overwhelming majority of scientists share this view.

[Statement adopted by the AAAS Board of Directors, 16 February 2006.]

My third role as President Elect was to propose a set of new BSA committee members. I have done that and my recommendations will be discussed at the upcoming meeting in Chico, CA.