

---

# THE PLAIN DEALER

## Ohio faces a new challenge in intelligent-design debate

11/24/03

**Lawrence M. Krauss and Patricia Princehouse**

Two weeks ago, the Texas State School Board decided to leave biology texts alone.

It won't require that textbooks in the state be altered to include discussions of intelligent design. Scientists and teachers throughout the country were heartened by the decision. "Intelligent design" is an ill-defined and thus far unscientific notion that somehow, via unspecified supernatural mechanisms, living things must have been designed to be the way they are.

We in Ohio are, of course, familiar with this debate. Organizations that oppose modern evolutionary biology on religious grounds attempted to alter new proposed life-science benchmarks; they wanted the intelligent design concept inserted into the state science standards. Note that the Supreme Court had already ruled that ID's ancestor, "creation science," is not science but religion. The 1987 ruling also included the concept of creation by an "intelligent mind."

It was a great victory for science education in this state that instead, for the first time ever, the word evolution appeared in the standards in the context of biology. There is no requirement to teach intelligent design creationism.

There was a snag, however. The following "indicator" was inserted into the standards: "Describe how scientists continue to investigate and critically analyze aspects of evolutionary theory." Taken literally, this statement would require teaching of cutting-edge evolutionary biology. Yet many, including us, were concerned that those who are trying to force intelligent design creationism into the curriculum would claim this statement opened the gate.

So, the board clarified: "The intent of this indicator does not mandate the teaching or testing of intelligent design."

One might have hoped the matter would have ended there. Unfortunately, this issue has come back with a vengeance. A copy of a draft curriculum approved for field-testing and public comment in the state has been leaked. The Department of Education board approved this draft in September but withheld it from public scrutiny. We now understand why.

Consider the lesson plan associated with "allowing students to critically analyze nine aspects of evolutionary theory." One might have hoped that the students would be presented with, say, a rousing discussion of the vigorous controversy over how closely related dinosaurs are to birds.

They could then understand how predictions of evolutionary biology produced by the scientific community through decades of hard work and research have met all apparent challenges and led to substantial scientific progress.

Instead, students are required to "debate" each "challenge" as if they were in a government or English class, with some students required to take a position contradicting the results established by decades of sound science. There is little pedagogical value in requiring students to take positions that evidence has shown to be incorrect. Indeed, it is not clear that it is ethical. At the very least it would demoralize any students who took the debate seriously. Imagine forcing some young person to debate that the Holocaust never happened or that certain racial groups are inferior as a way of teaching them the fallacy of these notions.

Equally important, this process sheds no light on how "scientists continue to investigate and critically analyze" evolution. Science does not convene debates about well-established results. Rather, predictions of a theory such as evolution are compared to the data. If apparently anomalous data is uncovered, different groups of scientists will analyze and even debate it to judge if the results really are discrepant. But if they have been shown not to be, as is the case with all nine challenges promoted in the proposed curriculum, we don't waste our time rehashing old issues. We move on. That's how science works!

What's more, the nine supposed "challenges" to evolution come straight out of intelligent design creationism. A main source listed in the curriculum is the discredited book "Icons of Evolution," by the Rev. Jonathan Wells, one of the Discovery Institute authors who came to Ohio to promote teaching intelligent design.

Especially ridiculous is the ninth so-called "challenge" on the natural selection of peppered moths. This is Dr. Wells' favorite hobbyhorse in his self-declared war on Darwin. Particularly ludicrous is the claim that the well-supported observations of moth populations darkening over time in response to selective forces (a.k.a. microevolution), somehow represent a challenge to macroevolution (the formation of new species, called speciation). But no evolutionary biologist claims that the peppered moths did speciate. There are, however, well-documented cases of speciation in the laboratory that support macroevolution.

It is unfair to our children to waste their time in science classes on unfair and disingenuous debates in which one side is guaranteed to lose on the basis of existing data - debates that seem interesting only if one is ignorant of this data.

Why insert such red herrings into the curriculum?

The answer can only be that special-interest groups want to sneak

intelligent design in the back door, because they cannot enter it the honest way, by submitting their ideas to critical analysis by otherwise disinterested scientists. These individuals are violating the express intent of the Ohio Board of Education that voted on the state standards.

Appropriate action must be taken now to ensure that they do not continue their attempts to subvert science education. Texas, West Virginia and many other states have successfully fought back these attacks. Ohio must too.

Krauss is Ambrose Swasey Professor and chair of physics at Case Western Reserve University. Princehouse teaches evolutionary biology at Case.

© 2003 The Plain Dealer. Used with permission.

