



The Nucleus

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Texas Association of Biology Teachers*

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President's Message:

In September, I testified before the SBOE, urging them to place all books up for adoption on the state's conforming list. (For those who are interested in reading transcripts of what was said during the approximately 13 hours of testimony, go to <http://www.tea.state.tx.us/textbooks/adoptprocess/index.html>. Especially recommend reading are the remarks of Nobel Laureate Stephen Weinberg!) I would like to share an edited portion of my testimony with the members of TABT. Specifically, I wish to address the remarks of critics who claim that errors and weaknesses of evolution need to receive more coverage in biology textbooks. Virtually all of the alleged errors and weaknesses discussed come from information supplied by the Discovery Institute and its fellow intelligent design advocates. The passages below are taken from my September testimony on that topic:

"I have read the Discovery Institute's written testimony purporting to show factual errors in every single one of the textbooks' coverage of evolution. These critics claim they only want to increase and improve the coverage of evolution by removing these "errors" and thereby exposing the so-called weaknesses of evolutionary theory. I grant that biologists do debate some of the mechanisms of evolution. However, none of the current debates among evolutionary biologists involve any of the alleged errors presented by the Discovery Institute. By focusing on a few alleged errors and then correctly pointing out that biologists debate about evolution, the authors of the Discovery Institute reviews are using a "bait and switch" tactic in an attempt to discredit all of evolutionary theory, ignoring the many, many lines of evidence which converge to support the modern evolutionary view of the living world.

The greatest rewards in science come from overturning accepted doctrine and thereby improving our understanding of the natural world.

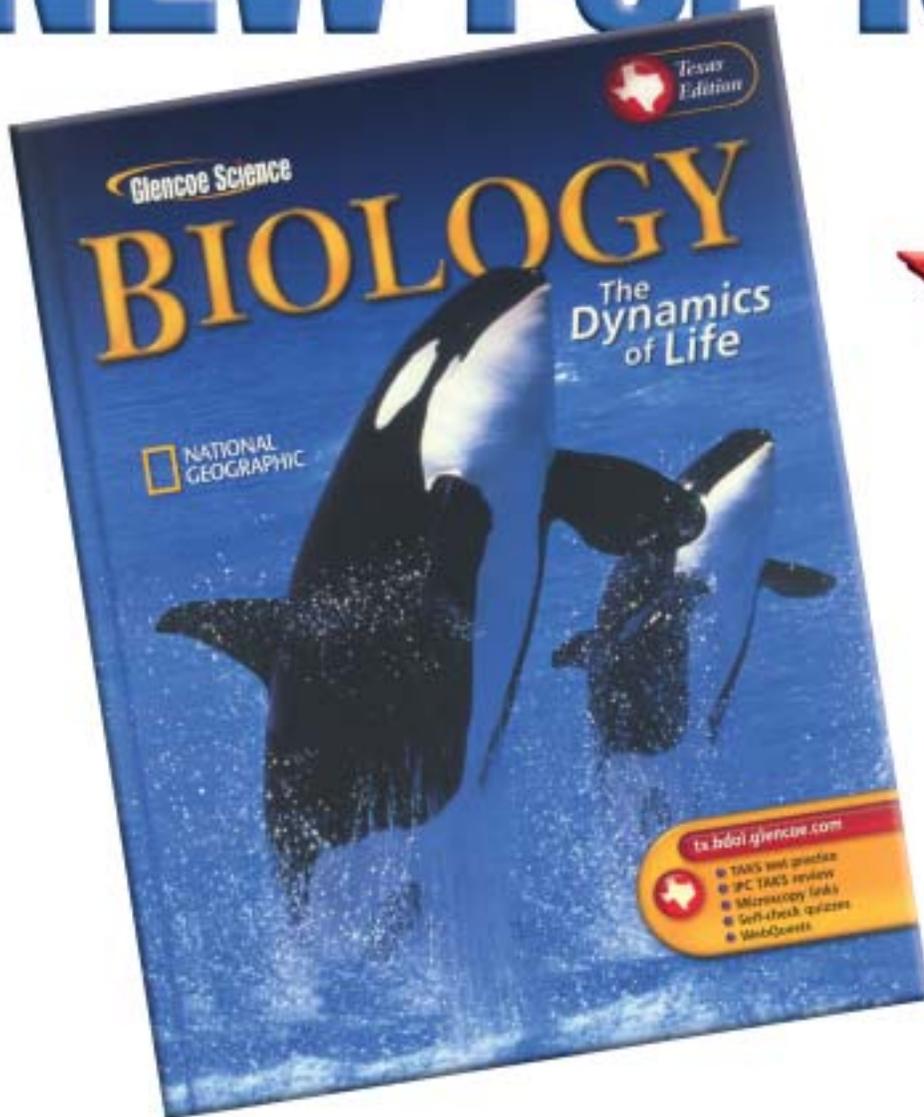
If the Discovery Institute and its members have actually discovered viable scientific evidence that would overthrow, or even alter, currently accepted evolutionary theory, they should be submitting their research to major scientific journals for peer-review. That is the mechanism which makes science the self-correcting endeavor we find so powerful.

This is not the approach favored by the Discovery Institute, or any of those allegedly conducting research into "intelligent design." It certainly appears that they are not willing to subject themselves to this long, arduous process. Instead, they do their best to circumvent it by going straight to local communities and making attempts to force the insertion of their ideas into science textbooks without any input from practicing biologists. Then, in the greatest irony, they appeal to fair play arguments expecting us not to notice it is they who are being unfair by trying to "cut in line", so to speak, skipping over the steps true scientists use to receive acceptance in the scientific community.

If the Discovery Institute is sincere in its belief that their work and ideas are scientific, then the proper path is clear. Do the work, have it peer-reviewed in scientific journals and get it accepted by scientists. Then their ideas will automatically be included in science textbooks. That is the way of science and it is an insult to all of us for them to attempt to get their views in textbooks any other way.

Finally, as a successful biology teacher, I want to assure you that there is no concept more important to my students' understanding. The theory of evolution allows us to see biology as a unified discipline and continues to be one of the most robust and fruitful theories in all of science. No other theory has sparked more productive research into the diverse fields of biology: research which benefits all of us and which our students must understand in order to successfully continue the work done before them."

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Keith Watson Selected for Double Honors Texas Outstanding Biology Teacher Award (NABT) Honorary Member Award (TABT)

The National Association of Biology Teachers, in conjunction with Prentice Hall Publishing Company, Leica Microsystems, Ken-A-Vision and the Texas Association of Biology Teachers, is pleased to present Keith Watson with the 2003 Outstanding Biology Teacher Award. This award, given annually since 1961, identifies a teacher from each of the United States, its possessions, Puerto Rico, the District of Columbia, and Canada who has made valuable contributions to the profession and to his/her students. Criteria for the award include teaching ability, experience, inventiveness, initiative, inherent teaching strengths, and cooperativeness in the school and community. A special presentation was given by the National Association of Biology Teachers at its National Convention in Portland, Oregon on October 20, 2003. In addition to the certificate awarded, a precision pair of binoculars by Prentice Hall, a microscope from Leica Microsystems, and a video flex camera system from Ken-A-Vision was presented to Watson.

Additionally, the Texas Association of Biology Teachers is proud to announce the election of Keith Watson as the 2003 Honorary Member of TABT. Honorary Member is the highest award that TABT bestows on a living individual. Those who qualify for TABT Honorary Membership are considered professional models for their peers. The Texas Association of Biology Teachers first announced Watson's election as Honorary Member during the annual STAT Luncheon held October 31, 2003 in Houston, Texas. In recognition of his honor, Keith received life membership in the association, a plaque, an award binder and a cash award.

Mr. Watson is Science Department Chairman and biology teacher at Winnsboro High School in Winnsboro, Texas. He received his Bachelor of Science degree in 1972 from North Texas State University and his Master's degree in 1978 from East Texas State University. Keith's teaching career spans 31 years, including serving as a teacher and assistant principal at Allen High School, principal at Ralls High School and most recently at Winnsboro High School. His career at Winnsboro began in 1983 when he was named principal of the high school. However, in 1984, he chose to return to his "first love in education, teaching biology."



Keith Watson accepts the Texas OBTA at the NABT Convention in Portland, Oregon.

"Keith's teaching has shown improvement throughout his career" stated Alton Biggs, one of Mr. Watson's colleagues while he was in Allen and Founding President of the Texas Association of Biology Teachers. "It has been my pleasure to follow his career to this point. I can think of no one more deserving of both NABT's and TABT's highest awards for teaching."

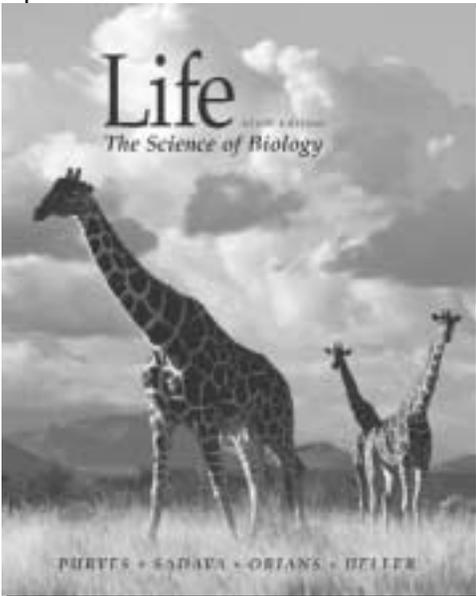
Keith describes his philosophy of teaching as one in which he strives "to expose my students to as many aspects of the life sciences as possible." He also feels that life science education is critical because "it is the students in today's classrooms that will be responsible for making decisions that will influence all of mankind. Those decisions must be based on sound knowledge and the best evidence available."

Mr. Watson is an admired and respected member of the biology education community. He served as President of the Texas Association of Biology Teachers in 2002. He has also been the Texas State Representative to the National Association of Biology Teachers since 1993. Additionally, he was awarded the Texas Association of Biology Teachers' Outstanding Biology Teacher Award in 2000.

The National Association of Biology Teachers and the Texas Association of Biology Teachers are extremely proud of Watson, his accomplishments, and the news of his awards. "Such accomplishments and awards should not only make Keith's school district but the entire state proud. He is a priceless member of the education community," Robert Dennison, President of the Texas Association of Biology Teachers, said.

Meeting the AP Standards for Biology Educators and Students

On
the Texas
Conforming
List



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TABT Outstanding Biology Teacher Announced

Cheryl (Pittman) Wendling was presented with the TABT's Outstanding Biology Teacher Award at the Conference for the Advancement of Science Teaching in Houston on Saturday, November 1. Last year she was a teacher at Pearland High School. In fact, she taught at Pearland HS from 1994 - 2003. During the 1996-1997 school year she taught in Whitefish Bay, Wisconsin.

She began teaching in 1983. She has also taught at Vidor High School, Bridge City High School, and South Houston High School. Wendling was the lead developer of NASA/ Lockheed-Martin's Astrobiology curriculum, "Fingerprints of Life", which she has presented at numerous state and national science teacher conventions.

Although Cheryl is not currently in the classroom this year, she has made a difference for many biology students and teachers. Indeed, Wendling can be considered a model for the rest of us.

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What's on your label? Alton Biggs, TABT's Computer Records Clerk, reminds teachers who receive The Nucleus by mail to note their TABT membership expiration date on the label. Teachers who have E-mail addresses will continue to receive a notice before membership expiration, but those who do not provide an E-mail address are warned only once on the label.

TABT thanks the following companies for generously donating door prizes at our annual luncheon held during CAST 2003 -

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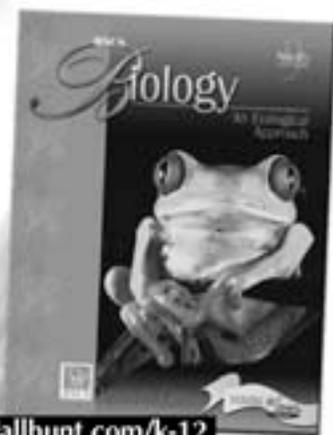
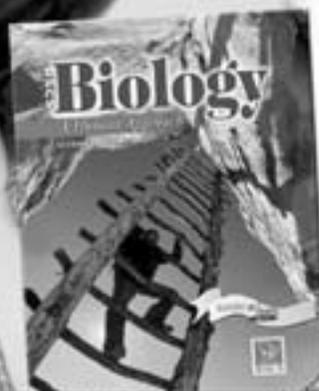
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Thanks to Tish Taylor for sending the photo above. It reminds us to tell you that TABT wishes you and your loved ones a Happy Thanksgiving!

Humor in the Biology Classroom

by Alton Biggs

One of my favorite activities is to get students to think. It often takes a fair amount of concentrated and frustrating effort on my part, but when I find that I have prepared students with a deep understanding of biology the effort pays off. The real question is, "How do I know that my students understand the concepts I've been trying so hard to explain."

At the top of Bloom's Taxonomy of thinking skills is synthesis. When your students can synthesize what they have been taught with what they already know in novel ways, you have achieved your goal. There are a hundred ways to evaluate students, but one way I do it is with an activity that often produces hilarious results.

I have students make a cartoon. Sometimes I assign the topic, but near the end of the semester or

(continued to next column)

school year I often let students pick any biology topic of their choosing. What do their results look like, you ask? Check the cartoons produced by some of my students and see for yourself. The question to ask yourself - in between your giggles - is have they synthesized the content. I think they have!





Texas Association of Biology Teachers
c/o Alton Biggs, Computer Records Clerk
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