

oxymoronic "creation science?" Maybe not, but abuse and misuse of science and the science classroom, with an underlying agenda to introduce religious dogma into the academy, is growing, not subsiding in our public schools nationwide; and the warlike struggle to keep it out does not always go well (see Gillis 1994). "Creation science" will just not go away. Those who endorse it might gain ground if evolution is ignored for a myriad of reasons including fear of inciting public controversy over discussions of evolution, particularly of the family Hominidae, in the anthropocentric biology class. The pressure on teachers is real. Still, we must be cautious with any biology curriculum that may cost us during this continuing siege on science.

One goal of the human-centered curricula often seems to be to train and ultimately produce more Ph.D. research biologists and more physicians. However, Ann Gibbons' (1994) recent overview in *Science* disputes a need for more of these highly trained graduates of specialized schools. Academic research jobs are increasingly hard to come by and industry is not a deep-pocketed answer. Medical school applications, but not positions, have increased significantly this decade; but is there really a need, a role, for even more physicians?

Instead, we need to do a better job of educating nonscientists, the students who will go on in law or business, drive a cab or truck, build homes or roads, even venture into politics. It is these students who must understand how science, not just human biology, functions; the kind of questions science can help answer, and the kind it cannot. They must know about global biodiversity—how it got here and what it will take to keep it here.

For many reasons, few high school or college teachers take their students into the field, especially in anthropocentric biology courses. Accordingly, students too often think biology is done primarily in a stark laboratory, finding and memorizing parts of a preserved animal or plastic model of a human. How many adults still equate biology to dissecting a frog and labeling the human anatomy? Alternatively, how many equate it to identifying, sampling, observing, questioning and experimenting in the field? How many students or adults even know scientists do these things, other than a few famous dinosaur bone seekers? When asked to envision a scientist, most people see a neatly kept person indoors in a white lab coat researching

some human disease. What they do not envision is a zealous individual outdoors in field garb attempting to understand how organisms interact and how they became what they are, where they are. To appreciate the richness and importance of biodiversity, we must get students out of the classroom and laboratory and into the biosphere.

What percentage of biology students, high school and college, ever actually get into the field to experience all the nonhuman species?¹ How many AP courses focus on human genetics, physiology and anatomy, and on cellular and molecular biology? How many deal with field biology or ecology?² How many presentations or workshops at the St. Louis convention

¹ I received my B.S.Ed. degree in biology at a large southwestern university. Never during my four years as an undergraduate did a biology class venture into the field. Never. I am now a bench scientist and laboratory teacher.

² I have trouble with the rationalization that academic budgets thwart broad-range curricula and limit us to "topics human." Like our own spending, except for departments and schools not individuals, education budgets reflect priorities and values. It may not be easy, but these budgets, like personal ones, can be revised to support priorities and values.

dealt with some aspect of field biology? Answer: about 35 of 220, or 16%. Is this really the direction we want for a national biology curriculum? I don't think we should ignore *Homo sapiens*; we just should not worry about them so much and get off our anthropocentric center.

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Letters

ABT Authors Praised

Dear Editor:

This note is intended to be a staunch fan letter in praise of your editorial and Joe McInerney's book review in the Nov/Dec, 1994 issue of *The American Biology Teacher*.

You two are doing a great job in the professionalism of biology teachers, whether with tongue-in-cheek humor or with observations on major issues that impinge on biology teaching.

What you are doing is most important. My heartiest congratulations!

Arnold and Hulda Grobman
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More on Political Correctness

Dear Editor:

The processed tree carcasses of pages 452 to 454 of the *ABT* (Volume 56, No. 8) were a welcome ending to this week.

Believe me, from a bulimic, follicle-challenged, chronologically gifted, X chromosome-oppressed human American, I enjoyed it all.

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