

EDUCATING THE EDUCATORS

by Massimo Pigliucci

In 1543 the world got a piece of shocking news: it seems that not only is the earth not the center of the universe, as Copernicus and Galileo had amply demonstrated, but that human beings are not the pinnacle of creation after all. This devastation to our self-esteem (as Freud called it) – the second in three centuries – was caused by Charles Darwin, a quiet Englishman who had made his lifelong activity the study of the natural variation of living organisms. As is well known, the publication of his *On the Origin of Species* caused quite a stir in academic circles and in the general public. The first kind of controversy (the scientific one) lasted several decades: by the turn of the 20th century the theory of descent with modification (what Darwin called it), or evolution (as we now refer to it), was as solidly established as relativity or the theory of gases.

As for the second sort of controversy: while the general public in most European countries does not consider the notion that we are closely related to chimps and monkeys particularly outrageous anymore, a vocal minority in the United States refuses to accept it on ideological grounds: it's not in the Bible, so it can't be.

How can this bizarre state of affairs persist into the 21st century?

As a scientist, this seems as incredible as somebody seriously defending the idea that the earth is flat (which a few people belonging to the Flat Earth Society in America actually do!). Scientists are not in the business of questioning people's religious beliefs, but they are also paid to teach the best of what we have good reason to know, leaving individuals to make decisions on how to reconcile the demands of science with their own religious views.

The Tennessee Darwin Coalition served as inspiration behind the international Darwin Day Program. The Darwin Day Program works to encourage the public about evolutionary biology and to prompt scientists to get out of their ivory towers at least a few hours and talk to the people who, after all, pay their salaries with grants. Surely this sort of communication between experts and lay people is a good idea. Bridging the gap between science and society is what the Darwin Day Program is all about.

In case you'd like to start your own Darwin Day celebrations, let me tell you what we did in Tennessee this year.

The events started on February 11 with a workshop for local junior and high school teachers on how to use evolution as an example of critical thinking. Imagine! Teaching it would be much better for students to learn about the process of science than certain conclusions (e.g., that we did evolve from a common ancestor shared with recently living chimps) are actually reached instead of just learning facts that are to be taken on faith.

On February 12 there was a whole array of events, starting with an all-day in-house symposium at the student union where faculty and graduate students will answer questions about evolution, and continuing with a documentary festival in which videos were followed by a discussion of the main ideas presented. Darwin Day 2002 in Tennessee ended with a special lecture by philosopher Elliott Sober (of the University of Wisconsin-Madison), who nicely showed why intelligent design theory is actually not science at all (see his paper in this anthology.)

Now, you don't have to do all this to have a Darwin Day next year, but make the most advantage of your local colleges and universities - work with the community in which you are a part.

While it is astounding to see that the state of science education in this country is such that people proudly "reject" well established scientific theories simply because they don't fit with their preconceptions, there is a bright side to almost everything. The evolution-creation controversy is no exception. After my rude awakening to the realities of creationism when I moved to Tennessee, I started to study the problem more closely. In so doing I learned quite a bit about why people believe what they believe. One of the great what shortcomings of science education are contributing to cause the problem. The result has been a better awareness of the situation and a renewed willingness to

by attacks on their discipline from as varied sources as the religious right and the academic left—may be finally starting to realize that they have a moral obligation to come to the public and explain what they are doing, why and how. This, as the final words of Casablanca famously went, may be the beginning of a beautiful friendship. The result could be a better informed and critically thinking public, the true guarantors of a democracy... and a civilization. ☺

[ABOUT THE AUTHOR]

Massimo Pigliucci is an Associate Professor at the University of Tennessee in Knoxville, where he teaches ecology and evolutionary biology. He has published 49 technical papers and two books on evolutionary biology: *Phenotypic Evolution* with Carl Schlichting and *Beyond Nature vs. Nurture*. Dr. Pigliucci has received the Oak Ridge National Labs award for excellence in research and the prestigious Dobzhansky Prize from the Society for the Study of Evolution, of which he is now Vice President. Dr. Pigliucci is also widely published within skeptic and freethought journals, and presents lectures and debates throughout the country. A book of his essays entitled *Tales of the Rational: Skeptical Essays About Science and Nature* has been published and his monthly e-column entitled *Rationally Speaking* is hosted on numerous web sites. Massimo Pigliucci is Vice-Chair of the Darwin Day Program.

[ADDITIONAL RESOURCES]

Darwin Day at the University of Tennessee, Knoxville: <http://fp.bio.utk.edu/darwin/>

Massimo's Skeptic & Humanist Web: <http://fp.bio.utk.edu/skeptic/>