



Celebrate Darwin Day 2009: Stand Up for the Science of Evolution

This year, February 12, 2009, is the two hundredth anniversary of the birth of Charles Darwin. 2009 is also the 150th anniversary of the publication of Darwin's "On The Origin of Species by Natural Selection", a monumental work and tremendous scientific achievement.

If you could imagine a world without Darwin and the theory of evolution by natural selection, it would be a world impoverished in every dimension. Modern medicine would be crippled, without a deep understanding of how to prevent infections that rapidly evolve and grow resistant to treatment; we would have a greatly diminished understanding of the threats to biodiversity from alien species and habitat alternations. We would not appreciate the "grandeur in this view of life", to use Darwin's own words – the beauty and amazement of how all of life developed through natural processes. And science itself would be weakened in an almost incalculable way.

There is evidence of evolution *everywhere* life goes on. We have a sweeping, astonishing and scientific panorama of how life developed from single cells to all the complexity and diversity that we know today. The fossil record, once thought to have too many "gaps," grows more complete every year. We have a synthesis of modern genetics and Darwin's mechanism of natural selection that would delight and amaze Darwin, if he were somehow able to see it. This decisively confirms and deepens our understanding of natural selection by showing the source of the endless variation among individual organisms and how it is inherited.

Darwin went up against the entrenched religious prejudices of his day (and ours), applied the basic principles he discovered to human beings, and suggested that human ancestors evolved into *Homo sapiens* in Africa, even though no fossil evidence of this existed in his day. Now immense evidence of all kinds has been discovered, and there can be no doubt that humans evolved from a common ancestor of African primates.

The concept of biological evolution is one of the key pillars of modern science. Public access to understanding evolution has in many ways become the arena in which the role of science and the scientific method in society is being fought out today. It should be a matter of grave concern to everyone that there are powerful and continuing creationist attacks on the ability of children in public schools to learn core truths of evolution. It should be a matter of public outrage that museums and public institutions like science centers exist in an atmosphere

where they feel unable to openly talk about and explain evolution; that in a number of state legislatures and in state boards of education, a new round of attacks on teaching evolution is in the works; that a bill attacking evolution has been signed into law in Louisiana. It is not simply evolution, but science that is under assault.

The Bush administration brought an eight year attack on science that enormously intensified this poisonous and deadly atmosphere. The result was more than a series of bad policies, even though many were very bad indeed, but an assault on science itself, the method of inquiry which has enabled people to understand and transform the world in very powerful and amazing ways. And the Bush years greatly strengthened the Christian fundamentalist movement which today has great reach and influence. While Obama says he personally believes in evolution, he has made embracing this movement a core element of his view of "healing divisions". Some creationist forces have clearly stated their aim goes far beyond attacking evolution; they seek to purge society of the "disease" of systematically seeking natural explanations for natural phenomena. We do not need to seek unity with this - we need a determined fight to defend science. It is up to us.

All of this makes Darwin Day 2009 even more important – as a celebration of Charles Darwin's magnificent scientific achievement and as a contribution towards a society in which science, scientific discoveries and the scientific method are celebrated, valued, and popularized.

Let's have a Darwin Bicentennial with society-wide impact.

We encourage everyone to help organize and participate in Darwin Day celebrations, and to circulate this statement everywhere, distribute it to friends and colleagues, post it on the web.

Share with us your ideas and plans; we will post Darwin Bicentennial news on our website. Contact us at mail@defendscience.com. A downloadable version of this Defend Science Darwin Day Statement is available at our website.

<http://www.defendscience.org>

Defend Science
2124 Kittridge St. #182, Berkeley, CA 94704