Feburary 9, 2009

Dear Sir or Madam,

Your **Science and Technology** article on Evolution (February 7th) gives much wonderful detail, while missing the main points, I fear.

The fundamental idea of evolution is more mathematics than science. If an organism reproduces, and some of its children reproduce more than others, there will be more of them. If organisms reproduce more because of an inherited characteristic, their children will have more of that characteristic than the parents. That characteristic will predominate. The organisms evolve. Writing these sentences as differential equations shows that evolution is a fact of mathematics, not science. The mean value of nearly any characteristic of a reproducing species drifts. Mathematics shows that reproducing systems, subject to selection, must evolve.

Science enters the argument when one observes the world (1) to see if organisms reproduce (2) to see if organisms are selected (3) to see if organisms do in fact evolve. These observations are not difficult and the conclusion is obvious to anyone who makes them, as it was to Darwin and Wallace. Life evolves. Observations show that life evolves.

Observations also show that some physical laws are remarkably accurate. How a super-natural being can guide the world--without violating the natural laws we scientists study every day---remains a mystery.

Ever yours

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