

Sedgwick's understanding of natural law was opposed at the geological and scientific level by Lyell and Darwin, and at the moral level by the libertine John Stuart Mill. Sedgwick's understanding was defended by the old earth creationist William Whewell (1794–1866) of Trinity College, Cambridge University (Professor of Mineralogy, 1828–1832, Professor of Moral Philosophy, 1838–55) (*Ibid.*, Vol. 1, pp. 25, 95, 404–5; Whewell's *Of Induction*, p. 79).

Gavin McGrath  
34 Mill Dr.  
North Rocks, N.S.W., 2151  
Sydney, Australia  
gmcgrath@easyc.com.au

## Correction: Values in Millimeters, Not Inches!

In my recent article on "Qualitative Hydrology of Noah's Flood" (*PSCF* 58, no. 2 [June 2006]: 120–9), I made a mistake on p. 122 concerning the average precipitation values for cities in the Iraq/Southern Turkey region. The values should be in *millimeters*, not inches. My thanks to Robert Rogland, who pointed out the correct values, and my apologies to all of those service men and women in Iraq who know better!

Carol A. Hill  
ASA Fellow  
17 El Arco Drive  
Albuquerque, NM 87123  
Carolannhill@aol.com

## Titanic Deck Chairs and the "Real" Adam

John McIntyre's illustrious background in physics has probably conditioned him to believe that novel—or at least highly interesting—concepts win Nobel Prizes! However, in theology, ideas that have not been accepted by the church through the ages are more than likely to be dangerously wrong.

McIntyre proposes that Adam needed to sin to change from "an 'it' within the creation" to "an 'I' outside creation" who had "taken on the character of the Creator" (*PSCF* 58, no. 2 [June 2006]: 90–8). The idea is not new. It was articulated by Joseph Smith nearly 200 years ago.

This all follows, of course, from the premise that evolution and standard dating are indisputable facts. Adam then becomes a hominid, with perhaps only a dim awareness of God, chosen from among his animalistic peers to receive the breath of life. Ignored are the biblical record of long life and rapid invention of technology and the scientific crumbling of the evolutionary façade.

It is a shame that so much brain power is wasted, essentially arranging the deck chairs on the Titanic, by tying theology to a contemporary paradigm, as the Scholastics did in assuming Aristotle to be infallible.

Ross S. Olson, MD  
ASA Member  
5512 14th Ave. S.  
Minneapolis, MN 55417  
612-824-7691  
ross@rossolson.org

## The Two Books: An Appreciated Article

Thank you very much, Giuseppe Tanzella-Nitti, for your article on "The Two Books Prior to the Scientific Revolution" (*PSCF* 57, no. 3 [Sep 2005]: 235–48). I have just finished re-reading your article and remembered that I should send you a thank you note. Your article was delightful, informative, and in impeccable English. Not a hint of an "accent" or a misused word! Another strong point is that your faith is thoroughly infused into the article. That is often very difficult for the believing scientist. (I am a chemist.)

Your article is timely. Many churches and leaders have trouble with accepting (good) science and wish to take a literal meaning of the holy Scriptures. In this way, they may make arbitrary statements about science, for example, the age of the earth. Your article is an excellent reference for a balanced and objective view on the issue. Any forthcoming articles, say on astronomy? Thank you again.

In Christ our Lord,  
Harry Alkema  
CSCA Member  
Burlington, ON Canada  
Harry.Alkema@ec.gc.ca

## Reduction in Science

I agree with Roy Clouser about the inadequacy of reductionist descriptions of natural systems, though not with his solution.<sup>1</sup> As the following examples show, the behavior of a multicomponent system is generally determined not only by that of its components, but also by the *relationship* between them.

1. Consider the wave emitted by an oscillator undergoing a combination of oscillations. The shape of this wave is determined not only by the amplitude and frequency of the components, but also by their *phase*. If identical oscillations are in phase, they reinforce each other, if out of phase they cancel. *N* components require the specification of *N* – 1 phases. This specification is at the level of the system, not the components.
2. Consider a gas. The properties of this can be derived from the motions of the molecules making up the gas. To do this, however, it is necessary to specify the relationship between these motions—namely, that they are *chaotic*.<sup>2</sup> A different relationship would result in different behavior. For example, if the motions were confined to a single direction within a pencil, the molecules would comprise a molecular beam.
3. Consider the substance ethanol (ethyl alcohol). Chemists describe this as being made up of molecules comprising two carbon atoms (C), six hydrogen atoms (H), and one oxygen atom (O). This specification is, however, incomplete. Chemists have also to specify the *arrangement* of the atoms in the molecule, as pictured in (I) below:

