

Corrections

John Geary, in his letter on climate change (*PESA News Resources* No 111), boldly stated that “Ultimately Earth’s climate is governed by the total amount of energy it receives from the Sun”. If this were the case life as we know it would never have come about, since Earth would just be getting hotter and hotter as it receives more and more energy. Presumably what John meant was that climate was controlled by the balance between the energy received and that radiated or lost by other means. However as he does not refer to the greenhouse concept in his letter I’m not sure that he has familiarised himself with the current climate change science, but instead seems merely to be trying to ascertain whether or not the next ice age is almost here. Of course it is the greenhouse effect and its relationship to CO₂ concentration levels in the atmosphere that is at the centre of current climate concern, and it is the greenhouse effect that can change the balance between the energy received and that lost.

Graham Bradley, in his letter in the same issue, aptly quotes the *Helicobacter pylori* breakthrough of Dr Barry Marshall but somehow

thinks the lesson is against the climate change scientists. The correct analogy is this, Graham. Med students used to learn at university that stomach ulcers were caused by excess acidity, while geoscientists learned that climate change (at least in the geologically recent past) was due to Milankovitch Cycles.

When in later life it was revealed that stomach ulcers were caused by bacteria, and the current climate change was very likely due to mankind’s input of CO₂ into the atmosphere, a lot of the doctors and a few of the geoscientists could not bring themselves around to this new knowledge, as they had too much investment in the old ideas. Anyone needing confirmation of this need look no further than John Geary’s letter.

Unfortunately, such examples of woolly thinking or not really thinking at all typify much of what passes as ‘science’ for the climate change deniers. It is human nature to try to explain new experiences in terms of existing knowledge. However, in the case of current and geologically recent climate change, the facts are not the same. Perhaps most significantly, today the increasing

CO₂ levels are in advance of increasing temperature (CO₂ is the cause) whereas in periods of increasing temperature associated with the onset of an interglacial period the temperature rose in advance of increasing CO₂ levels (CO₂ was an amplifier). As pointed out by David Lowry (*PESA News Resources* No. 107), the greenhouse effect of increasing CO₂ concentration in the atmosphere was predicted more than a century ago. The other worrying difference between this and past climate change periods is that current human land use and dependence is going to make it much harder for us and other living inhabitants of Earth to adapt to the disruptions of a warmer climate.

In my own letter of the last issue, Dr Playford’s title was removed from my original in two places during the editing process. This made my last sentence seem quite aggressive, which certainly was not my intention. Also hundreds of my devoted readers have contacted me to tell me that where I had “eastern and northern Europe”, “eastern” should have read “western”.

Andrew Nelson ■