

discouraging note in which Gratzel feels compelled to quote Werfel: "For those who believe, no explanation is necessary, while for those who do not believe, no explanation is possible."

Has the general readership already hardened into two camps on each of the eight examples of "bad science" explored in the book? I think not. I hope not. Is this a general assertion about the uselessness of making any distinction between good and bad science? One would like to say "science" and "non-science" in place of these adjectives, but, as Gratzel points out, just about everything is called "science" these days.

**A. K. Dewdney**

Department of Computer Science,  
University of Western Ontario,  
London, Canada  
e-mail: akd@csd.uwo.ca

## Soil without life?

*Sir* — Over the past few weeks I have read with great interest your coverage of the discoveries of the Mars Sojourner<sup>1</sup>. There have been many fascinating data reported about the mineral constituents of Mars rocks.

At the same time, however, references are made to martian soil without any data

to support the existence of this material. Careless use of the term soil is misleading<sup>2</sup>.

For many in Earth sciences, soil imparts a notion of biological activity for which we have no evidence on Mars. In fact, most definitions of soil are closely linked with plant growth, organic matter or biological activity<sup>3–6</sup>.

Although I do not subscribe to all these definitions of soil and I do not want to limit the study of pedology solely to planet Earth, I also do not envisage all martian dust as martian soil. It may well be that with continued advances in planetary studies we need to re-evaluate the definition of soil. In the meantime it may be prudent to refrain from imparting this earthly quality to all planets.

**Daniel Markewitz**

Woods Hole Research Center,  
Woods Hole, Massachusetts 02543, USA  
e-mail: dmarke@whrc.org

1. Battersby, S. *Nature* **388**, 408 & 612 (1997).
2. Johnson, D. L. *Science* **160**, 1258 (1968).
3. Dokuchaev, V. V. *Russian chernozem*. (1883). In *Selected works of V. V. Dokuchaev*, 1, 14–419 (Moscow, 1948). Israel Prog. Scient. (Transl. Jerusalem, 1967; US Department of Commerce, Springfield, VA.)
4. Byers, H. G. et al. in *Soils and Men: Yearbook of Agriculture, 1938* 979–1001 (US Department of Agriculture, Washington DC, 1938).
5. Buol, S. W., Hole F. D. & McCracken R. J. *Soil genesis and classification* 3rd ed. (Iowa State Univ. Press, Ames, IA, 1989).
6. Wilde, S. A. in *Trans. 7th Internat. Cong. Soil Sci.* **2**, 711–714 (Madison, WI, 1960).

## The lost ape

*Sir* — Although recent correspondence has highlighted the way in which scientists are increasingly over-indulgent in their use of the concept of novelty (*Nature* **385**, 480 & **387**, 843; 1997), the practice continues.

In a recent contribution to *Nature* (**388**, 337; 1997) entitled "A new west African chimpanzee subspecies?", the authors suggest that "a previously unrecognized type of chimpanzee may be present in Nigeria and adjacent parts of Cameroon", but then go on to point out that if the subspecies is "eventually recognized, the name *vellerosus* seems to be available".

It would appear, therefore, that J. E. Gray described this potential "new" subspecies more than a century ago, a contribution that should not be overlooked simply because he lacked the technological advantages of polymerase chain reaction. Should not the recent findings be more accurately presented as a case of an old and forgotten subspecies that has been rediscovered and validated using new techniques?

**Terry Harrison**

Department of Anthropology,  
New York University,  
New York, New York 10003, USA  
e-mail: harrisnt@is2.nyu.edu