An introduction to appreciation of soil

In their new book, *Celebrating soil*, Megan R. Balks and Darlene Zabowski take the reader along on a planetary-scale virtual field trip to examine the spectacular diversity of soils and landscapes across the globe. For the seasoned soil scientist, this field trip will be mostly comfortable and reassuring, but not without the occasional opportunity for edification or even amazement (there is, after all, so much to learn). On the other hand, for the reader uninitiated in the finer points of the geological/ecological/meteorological interplay that yields up Earth’s soils, this journey should be a fascinating and eye-opening experience. Either way, the reader benefits from the considerable aggregated experience of the authors, and it is difficult to escape the sensation that one is involved in an extended, and extremely interesting, conversation with the authors about their careers’ work and the landscapes and soils they have seen.

At the very outset—indeed with the title of the volume—the authors state their objective of providing a more-or-less optimistic, and certainly celebratory presentation of soils, with emphasis on the many benefits that soils provide to humanity. Thus, the overall tone of the book is one of reverence, enthusiasm, and true passion for soils and landscapes; words like “beautiful” and “wonderful” appear in nearly every chapter. The first chapter of the book concerns the “harmony” between soils and their environment, and leaves the skeptical reader worried that the entire book will be annoyingly sanguine. Fortunately though, throughout the text the authors give fair and sober treatment to the many challenges facing the global soil resource, and the complications that can arise when humans are guilty of poor management or development decisions.

*Celebrating soil* is well-organized, and sensibly starts out with first principles, including a comprehensive, but concise, reprise of Hans Jenny’s famous soil formation factors. The next two chapters then logically follow, with one describing a major process of rock formation which provides parent material for soil formation (volcanism), and the other describing a major weathering and transport agent (water, including cases of presence and absence). Next, there are chapters devoted to forest soils and grassland soils, with expansive treatments that touch every continent where such ecosystems occur, and then chapters devoted to soils in extreme and unstable environments. The final two chapters deal with humanity’s uses and impacts on soil resources, and responsible management of these resources, respectively. Each chapter, in keeping with the theme, ends with a section “celebrating” some aspect, usually the productivity, of the soils treated in the chapter. This insistence on celebration does have the effect of leaving the reader feeling optimistic about the regenerative and resilient nature of most soils, and leaves the authors with their objective well met.

In the actual reading of the text, I was confounded by the fact that the things I liked most about the book were also the precise things that I disliked most. The ease of reading, conversational tone, and pace were achieved, in part, by not including a single in-text citation of supporting literature, but the absence of such citations left me wanting. There is an appendix with a “List of sources/further reading,” but even this seems inadequate as it only lists 30 or so references. Another ambivalence is generated by the fact that the text is packed full of figures. An appealing use of figures was in the chapters on volcanic activity and extreme environments (where I had the most to learn). Here the figures and text worked together perfectly to keep me turning pages. On the other hand, in chapters covering more familiar territory, or perhaps after too long a stretch of reading, the figures seemed distracting, and felt at times like I was being subjected to a travelogue photo presentation. The figures consist of at least 500 individual photographs, with one or two figures on every page, so the text is visually stimulating, but careful study of the figure captions reveals that many of these suffer from inconsistent or inattentive editing. In the final judgement on the figures, however, I would come down firmly in their favor, and would recommend the book solely on the basis of the many figures that pair photos of the landscape or vegetative cover with the associated soil profile. My rough estimate is that there must be at least 100 photos of different soil profiles contained in the book, with attendant commentary on the processes that led to the development of the pictured profile, and this is where the celebration is most justified.
To conclude, I struggled to decide just whom the audience might be for this book, but this is due mainly to its accessibility and broad appeal. Although the text does not quite achieve the status of technical reference, I think *Celebrating soil* would be well-suited to be a supplemental text for undergraduate courses in landscape ecology, environmental studies, or conservation and sustainability. I would even consider giving the book as a gift to a friend or relative who had interest in geology, gardening, or ecotourism. In short, anyone interested in learning about general patterns, unique peculiarities, history, human use and management, or resilience and recovery of soils and soil function could benefit from *Celebrating soil*.

**Mac A. Callaham Jr.**  
Center for Forest Disturbance Science  
USDA Forest Service, Southern Research Station  
320 Green Street  
Athens, Georgia 30602 USA  
E-mail: mcallaham@fs.fed.us