Progress in Physical Geography

http://ppg.sagepub.com/

Research resource review: Schultz DM 2009: Eloquent Science: A Practical Guide to Becoming a Better Writer, Speaker and Atmospheric Scientist. Boston, MA: American Meteorological Society. 440 pp. US$45 paper. ISBN: 978 1 878220 91 2

Paul Williams

Progress in Physical Geography 2010 34: 729
DOI: 10.1177/0309133310340050102

The online version of this article can be found at:
http://ppg.sagepub.com/content/34/5/729.citation

Published by:
SAGE
http://www.sagepublications.com

sound propagation, and human biometeorology. While the ten-page chapter cannot present each topic exhaustively, most basic contents are covered, such as Pasquill stability classes and empirical equations to parameterize surface roughness and human body heat balance.

The major drawback of *Micrometeorology* as a textbook is the total absence of review questions, which students can use to monitor their understanding of the subject matter. To avoid possible confusion, a future edition could also helpfully reduce the number of symbols that represent different variables among the chapters. Too many German publications as presently cited are hardly accessible to foreign readers, preventing more specific evaluation of sources.

The English-language editor of *Micrometeorology*, the American meteorologist Carmen J. Nappo, makes the book very readable while successfully maintaining its lively European style. Inadvertent errors, however, appear occasionally; for example, the text for the Richardson number is not its definition in equation 2.20, but its reciprocal value. The present edition is regretfully littered with typos, though all figures are of high print quality, with very few exceptions (Figures 1.2, 3.20, and 4.3). Overall, the book *Micrometeorology* is an impressive work, and extremely helpful for obtaining a holistic picture of the field. Its diverse readership should go far beyond students and professionals in the atmospheric science, to reach those in adjacent disciplines. They will undoubtedly join me in finding *Micrometeorology* highly engaging to read and a useful contribution to any atmospheric science library.

References

Cheng Y, Brutsaert W 2005: Flux-profile relationships for wind speed and temperature in the stable atmospheric boundary layer. *Boundary-Layer Meteorology* 114: 519–38.

Drexler JZ, Snyder RL, Spano D, et al. 2004: A review of models and micrometeorological methods used to estimate wetland evapotranspiration. *Hydrological Processes* 18: 2071–101.

Glickman TS 2000: *Glossary of Meteorology* (second edition). Boston: American Meteorological Society.

Grachev AA, Andreas EL, Fairall CW, et al. 2007: SHEBA flux-profile relationships in the stable atmospheric boundary layer. *Boundary-Layer Meteorology* 124: 315–33.

Smeets CJPP, van den Broeke MR 2008: Temporal and spatial variations of the aerodynamic roughness length in the ablation zone of the Greenland ice sheet. *Boundary-Layer Meteorology* 128: 315–38.

Schultz DM 2009: *Eloquent Science: A Practical Guide to Becoming a Better Writer, Speaker and Atmospheric Scientist*. Boston, MA: American Meteorological Society. 440 pp. US$45 paper. ISBN: 978 1 878220 91 2

Reviewed by: Paul Williams, *University of Reading, UK*

For reasons that will become clear to you, I am mentally drafting this book review while sitting in the audience at a major international science conference. I should be watching the presentation, but the speaker lost my attention long ago. He has crammed so many figures onto each slide that I cannot see which quantities are being plotted on which axes and with which colour scales. He eventually issues the obligatory apology 'to those at the back' who cannot see clearly, but I am sitting near the front! The audience sigh wearily, our expectations lowered after being subjected to a whole week (nay, a whole career!) of such treatment.

And so it is that, instead of concentrating on the speaker's ground-breaking research findings, I am wishing that more scientists would follow the advice given in David Schultz's excellent new book. The book is a comprehensive guide to writing and publishing scientific research papers, participating in peer review, preparing

and delivering scientific presentations, and communicating throughout one's career. In short, it is a practical guide to just about everything a working scientist needs to know about effective communication. Junior researchers, mainly postgraduate and postdoctoral, are the intended readership. However, I believe that many senior academics would also pick up useful tips – or at least learn whether what they have been doing all along is acceptable.

The chapters are short – around 10 pages each, on average – and self-contained. Therefore, readers may dip into and out of particular chapters of interest, if they prefer not to read the whole book sequentially. Perspectives other than the author's are provided in 'Ask the Experts' columns, with many eminently qualified contributors. The book concludes with two useful appendices (the first on commas, hyphens, and dashes; the second on commonly misused scientific words and expressions) and an extensive list of material for further reading. A Web site accompanying the book (http://eloquentscience.com) contains a blog that the author updates regularly (and without which I would not have known to capitalize the first letter of 'Web' in this sentence).

One reason the book is such a delight to read is that it is peppered throughout with colourful and entertaining quotes. For example, 'sacred cows make the best hamburger' (attributed to Mark Twain) reminds us that the best papers are often those that contradict accepted theories. The rule that speculation should be done sparingly at the end of a paper is reinforced by a comparison with dessert: 'If you eat all your dinner, then you are entitled to a little dessert, but you cannot rely on dessert for the entire meal' (attributed to Fred Sanders). The 'hit-by-the-bus moment' is when the preparation of a manuscript is sufficiently advanced that, if the lead author were hit by a bus on the way home, the paper could still be submitted and published with a posthumous tribute. The advice for reviewing submitted manuscripts is that 'authors are more likely to listen to your meaty negative criticisms if they are sandwiched in between warm positive supportive bread'. Finally, the fact that 'consumers know Frosted Flakes because of Tony the Tiger, not because of the ingredients list' reminds us to be selective about which details we choose to highlight when designing conference posters.

Books rarely add new words to their readers' vocabularies, but this book is an exception. For example, I learnt that *cryptomnesia* is the proper word for inadvertent plagiarism; that the 'royal' use of 'we' in speaking of oneself is called a *nosism*; that the minimum quantum of publishable knowledge is called the *publon*; and that conference abstracts submitted about work that has not yet been started are called *fabstracts* (presumably a contraction of *fabricated abstracts*). I also learnt many good tips that I will apply to my own work. For example, use sans serif fonts in figures and slides, because they are more legible than serif fonts when rescaled, photocopied, or viewed from afar. Also, focus on sentence structures when proof-reading a familiar manuscript by reading it backwards, sentence by sentence. Finally, draft the abstract of a manuscript by going through the text and grabbing all the important sentences, before rewording them into a coherent narrative.

No book is entirely free from minor errors, and no book review is complete without a list of them. First, despite advice to 'always define abbreviations and acronyms on first use', ESL is first encountered on p. 96 but is defined as 'English as a Second Language' only on p. 191. Second, in the text accompanying Figure 19.1, the manuscript numbers do not correspond to those used in the figure. Third, the Froude number discussed in Appendix B strictly should be called the gravitational Froude number, for the avoidance of ambiguity with the rotational Froude number. Finally, 'that', and not 'who', is used throughout the book as the human-referring relative pronoun. To my eyes and ears, 'the type of writer that carefully

constructs the manuscript' would be better as 'the type of writer who carefully constructs the manuscript', because the relative clause is modifying 'the writer', who is human. This is a minor quibble, and use of 'that' as the human-referring relative pronoun appears to be more acceptable in American English than in British English.

There is one piece of advice that I might add to the chapter on scientific ethics and misconduct. As Editor of *Geophysical Research Letters*, I see an increasing number of authors suggesting as reviewers the names of people who have already informally reviewed the manuscript before submission. This practice is, in my view, a mild form of misconduct, because the intention is to subversively bias the reviewing procedure to the author's advantage. Fortunately, invited reviewers usually declare their conflict and decline the review. What is also perhaps missing is a chapter specifically on writing grant proposals, although much of the advice that would be pertinent is covered elsewhere in the book.

In summary, I highly recommend this book. The author is well qualified, being both an experienced leader of communications workshops and an award-winning journal editor. The writing is clear (as you would expect for a book on effective communication!) and the treatment is comprehensive. Few researchers in the atmospheric sciences and intersecting disciplines would not benefit from the advice. I imagine that anyone who has ever squinted their way through a long conference session would agree.