

BOARD OF EDITORS**Anthropology****Patty Jo Watson**

Department of Anthropology
Washington University
St. Louis, MO 63130
pjwatson@artsci.wustl.edu

Conservation-Life Sciences**Julian J. Lewis & Salisa L. Lewis**

Lewis & Associates, LLC.
Cave, Karst & Groundwater Biological Consulting
17903 State Road 60
Borden, IN 47106-8608
812-283-6120
lewisbioconsult@aol.com

Earth Sciences-Journal Index**Ira D. Sasowsky**

Department of Geology and Environmental Science
University of Akron
Akron, OH 44325-4101
330-972-5389
ids@uakron.edu

Exploration**Paul Burger**

Cave Resources Office
3225 National Parks Highway
Carlsbad, NM 88220
505-785-3106
paul_burger@nps.gov

Human and Medical Sciences**Stephen R. Mosberg, M.D.**

#5 Foxboro Drive
Vienna, WV 26105-1939
304-295-5949
cavedoc@charter.net

Microbiology**Kathleen H. Lavoie**

Department of Biology
State University of New York
Plattsburgh, NY 12901
518-564-3150
lavoiekh@plattsburgh.edu

Paleontology**Greg McDonald**

Geologic Resources Division
National Park Service
PO BOX 25287
Denver, CO 80225
303-969-2821
greg_mcdonald@nps.gov

Social Sciences**Joseph C. Douglas**

History Department
Volunteer State Community College
1480 Nashville Pike
Gallatin, TN 37066
615-230-3241
joe.douglas@volstate.edu

Book Reviews**Arthur N. Palmer & Margaret V Palmer**

Department of Earth Sciences
State University of New York
Oneonta, NY 13820-4015
607-432-6024
palmeran@snynoneva.cc.oneonta.edu

EDITORIAL

Abbreviations, Acronyms and Terminology Usage in the *Journal of Cave and Karst Studies*

MALCOLM S. FIELD

INTRODUCTION

The writing of scientific articles for publication often necessitates the use of abbreviated terms, acronyms, and terminology specific to the field of study. To abbreviate a term is defined as to shorten and word or phrase to a form meant to represent the full form (Webster's II, 1984, p. 66). An acronym is defined as consisting of a word formed from the initial letters of a name or by combining initial letters or parts of a series of words (Webster's II, 1984, p. 75) and implying that the acronym is a pronounceable word. It is apparent from these two definitions that abbreviations and acronyms may often overlap. Terminology is defined as the vocabulary of technical terms and usages appropriate to a particular field, subject, science, or art (Webster's II, 1984, p. 1194).

THE PROBLEM

Recently, I was contacted by a reader of the *Journal of Cave and Karst Studies* with a question that surprised me. The reader, an experienced scientist in a foreign country, expressed confusion over some commonly used abbreviations and acronyms (e.g., GC-MS, SPME, EPA, GC-O and SEM study). Or, to be more precise, these are common abbreviations to only some of us. For example, EPA is to me pretty obviously an acronym for U.S. Environmental Protection Agency because I am employed by the EPA. However, although this acronym is obvious to me and may also be fairly apparent to most of our U.S. subscribers, it may not be so obvious to individuals residing outside the United States. As another example, to chemists a GC-MS is a simple acronym for a Gas Chromatograph-Mass Spectrometer, but to individuals with little or no background in chemistry this acronym is virtually meaningless. Scientific terminology is equally problematic for non-specialists. Prior to being contacted, I hadn't been aware of the problem some readers may have been having with various abbreviations, acronyms, and scientific terminology used in articles published in the *Journal of Cave and Karst Studies*.

THE EXTENT OF THE PROBLEM

The problem identified above likely occurs in all scientific journals, but is compounded in the various cave and karst journals, such as the *Journal of Cave and Karst Studies*, in two ways. First, although karst journals are specific to the subject matter of caves and karst, they are very general in that all aspects of caves and karst are covered. The *Journal of Cave and Karst Studies* includes Associate Editors with specialties in anthropology, conservation, earth sciences, exploration, life sciences, paleontology, and social sciences. These specialties are often then broken down into subspecialties. For example, the anthropology specialty also deals with archaeology while the earth sciences specialty includes chemistry, geology, geography, geomorphology, hydrology, hydrogeology, and others. Such a wide range of subject matter covered in the *Journal of Cave and Karst Studies* makes it very difficult for the professional cave scientist, engineer, journal editor, etc. to be able to intelligently read many of the articles published in the *Journal*

of *Cave and Karst Studies*. Yes, even the *Journal of Cave and Karst Studies* editors can find the wide range of subject matter covered, even within their general areas of specialties, somewhat daunting. Imagine how much worse it must be for the non-specialists.

The second aspect of the problem is the very high rate at which the various subspecialties are advancing. There are so many people conducting studies, sometimes directly and sometimes only remotely related to caves and karst, using newer equipment and methods, that it is difficult for even the cognoscenti to keep up. In addition, the incredible existing array and proliferation of scientific and engineering journals available throughout the world further exacerbates this problem because it is so time-consuming and difficult tracking down and reading newly published papers, even with the advent of the World-Wide Web. This problem is, of course, much more difficult for non-specialists, especially if they lack access to large university libraries.

POSSIBLE SOLUTIONS

A SOLUTION FOR EDITORS

This problem has caused some difficulties for the Associate Editors who naturally are not experts in all matters related to their specific subject areas. For example, the Life Sciences specialty covers all aspects of biology, which is an extremely wide subject area. To alleviate some of the difficulties our Associate Editors have been experiencing we have added two new Associate Editors. Kathleen H. Lavoie has agreed to accept appointment as Associate Editor for microbiology and Stephen R. Mosberg has agreed to accept appointment as Associate Editor for Human and Medical Sciences. These two new Associate Editors will be able to take on the review and editorial responsibilities in their respective subspecialty areas, which should improve many aspects of the *Journal of Cave and Karst Studies*.

A SOLUTION FOR READERS

Unfortunately, the above solution does not help our readers. To make reading easier for our readers I would like to suggest the following. First, for acronyms and/or abbreviations, authors should conscientiously write-out the full term and immediately follow the term with the acronym/abbreviation in parentheses. If the list of acronyms/abbreviations is long or somewhat uncommon, then it might be appropriate to also include a complete list of the terms along with their respective acronyms and/or abbreviations in an appendix or set of endnotes at the end of the article that the reader may refer to periodically while reading the manuscript.

Scientific terminology is more problematic. In some instances, specific terms may be briefly defined in the text of the article. Alternatively, in rare instances, the term may be defined in an appendix or endnotes section at the end of the article. This is not a greatly satisfactory method because it can be difficult for an author to determine what needs defining, and it adds length to the manuscript. Another, somewhat extreme alternative, is to

do as Hazel Barton did in the last issue of the *Journal of Cave and Karst Studies* (Barton, 2006). That is, develop and publish an introductory article on the subject matter with the intention of assisting the non-specialist to learn about the subject. Although many specialists might consider it very difficult to write such an article, it can be very helpful to non-specialists and should enhance the *Journal of Cave and Karst Studies* in many ways.

CONCLUSIONS

Abbreviations, acronyms, and scientific terminology can be very problematic for individuals unfamiliar with the terms used in a published scientific journal article. If full terms are not listed along with their respective abbreviations and/or acronyms, and various obscure scientific terms are not defined, readers will often not be able to follow the context and will cease bothering to read the published article.

I encourage all future authors to make a concerted effort to define all acronyms and abbreviations used in papers submitted for publication in the *Journal of Cave and Karst Studies*. Such an effort will benefit everyone. In addition, I ask that all future authors consider defining some obscure scientific terms used in papers submitted for publication in the *Journal of Cave and Karst Studies* so that readers will better understand the subject matter discussed in the paper.

REFERENCES

- Barton, H. A., 2006, Introduction to cave microbiology: A review for the non-specialist: *Journal of Cave and Karst Studies*, v. 68, no. 1, p. 43–54.
 Webster's II, 1984, Webster's II New Riverside University Dictionary: Boston, Mass., Houghton Mifflin Co., 1536 p.